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# AMIGA

## User

INTERNATIONAL

FEBRUARY 1994 £3.75

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£75**

**AMIGA USER INTERNATIONAL**

**SUPERDISK No 31**

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**A Fantastic  
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full paint program**

from Cleanto

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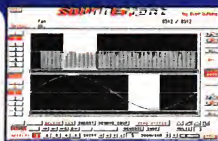
**Ask your newsagent! Or  
see the Superdisk page  
12 in this issue**

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**SUPERDISK No 32**

**FEBRUARY 1994**

**Fortune Cookie!  
Addresser - Get  
organised with this  
smart address book  
program.**



**FSInfo - Find out  
the File Systems.  
ScreenSelect -  
For all those multi-  
taskers out there!  
Icons - Select your  
Workbench icons.**

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PAINT  
FOUR**

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02



# The Vidi Amiga Range

Rombo, are proud to announce the launch of their new range of Multimedia Digitisers.

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Throw away your scanner, its too much like hard work !

*Real Time 24-bit  
Image Capture*

Vidi Amiga (24)



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# Amiga User

## INTERNATIONAL

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### ...And What They Used

Commodore's Amiga A3000, A2000, A500, Citizen's Swift 240C, Canon's BH-20 Bubblejet, Consultron's CrossDOS, Electronic Art's Deluxe Paint IV, GVP's A530 Turbo, Toshiba's IDE drive, Supra's V32 Fax Modem, Dattel's Action Replay MKIII, ASDG's Art Department Professional, Epson's GT-6500 colour flatbed scanner, Readysoft's AMAX, OpalTech's Opalvision, Innovatronic's Directory Opus, JCL's ColourPic Plus and Cabaret, John Veldhuis' VirusChecker, JVC's HR-D980 Video Recorder, Micro-System's Scribble!, 32bit RAM from First Choice Computers, Discovery Software's Grabbit. Cover pictures created by Gary Fenton using Personal Paint 4.0 and OpalVision.

### NEW YEAR...NEW LOOK

As you will see the cover doesn't look the same this month. New year, new look. We hope you like it and in the coming months you will see further changes both of design and editorial content. Changes? We'd rather call them improvements. But **AUI** was the first and we'll try to keep it still the best UK Amiga magazine. Enjoy.

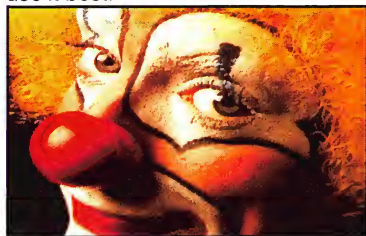
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Managing Editor Antony Jacobson says Commodore's survival may well be their best achievement.

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Personal Paint 2.1 - the acclaimed program from ace Italian software creators, Cloanto is yours entirely. Here's a few tips on how to use it best.



#### 10 AUI SuperDisk 32

Some top programs to entertain you in the long nights and to bring Spring to your Amiga screen. Assembled and sculpted by disk artist Gary Fenton.

#### 14 NewsFile

Anthony Mael and Martin Witton have been at it again! They've gone down to the depths and risen to the heights to find the excitements of the amazing and amusing electronic world.

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#### 96 The PD Stakeout

Gideon Overhead, keeping his and your wallet tightly locked, brings the best and oddest of the down market Amiga software world.

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#### 109 Write To Reply

It's what Bud Vennos grants you. You can make your comments, complaints and compliments and receive, sometimes, a compassionate hearing. At others, depending on his mood, he'll sort you out and no mistake.

### FIELD REPORT

#### 24 A Real Fantasy?

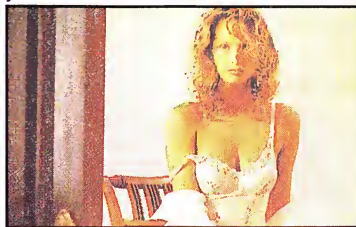
Heavily masked, Ashley Cotter-Cairns gets taken for a ride, and a flight, tripping the light fantastic in the virtual reality world at a VR conference.

#### 29 10 Year Old Baby

Michael Rumblelow finds that the compact disc is finally growing up at the CD-Rom Show.

#### 90 Porn Brokers

Shock! Horror! **AUI** stars in Channel 4 Exposé! Well, not quite but David Taylor and Anthony Mael force themselves to spend hours and hours and hours gazing at the not always disk-gusting and graphically explicit world of electronic lust. If you are easily offended or excited, you are advised to close your eyes while you read this article.

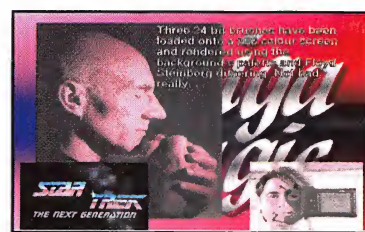


### TEST DRIVE

#### 30 Interplay

No, it's not escaped from the Porn Brokers, it's Andrew Gould investigating a new authoring system to let you create your own CDs.

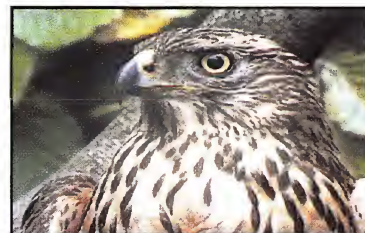
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Gary Fenton feels like a video showman with the stunning new features that this international program now provides.

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The world's best Amiga digitiser? A dazzled Alan Pusey finds the claims may well be justified for this astonishing British add-on.



#### 42 Just Imagine

Almost to the magic 3.0, Barry McCarthy test drives what might be the final, final rehearsal for this astounding package.



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Ashley Cotter-Cairns can look his bank manager in the eye after test driving Digita's program that puts his accounts in order and even in the black.



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FEBRUARY 1994 Vol. 8 No. 2

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USER  
INTERNATIONAL

Changes..Changes..

This was the old **AUI** masthead.  
Take a last look at it.

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**Amiga**  
*Dimension*

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No, it's not John Walker himself but a top of the line word processing program from Softwood that provides new standards for the Amiga.

## 48 Personal Paint 4.0

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## 51 Air Link

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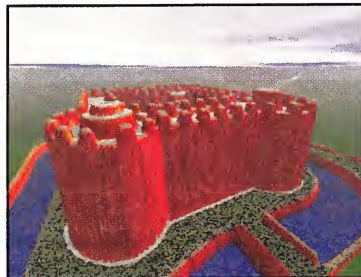
Barry McCarthy measures the pleasures of ever bigger storage with a Fujitsu Mangneto optical drive of very agreeable proportions.

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Gary Fenton finds that not all paint packages illustrate the same way, test driving this one from MegageM which is programmable.

## 58 Landscape Maker

Be careful before becoming a creator, advises Gary Fenton after experiencing the godlike feeling with this graphic package.



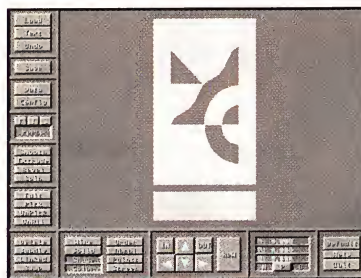
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More help and enhancements from the popular and easy to use programming program is what Gary Fenton has found.

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## 104 Programming Tips

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## SPECIAL OFFER

## 51 Personal Paint 4.0.

Yes, reviewed exclusively in this **AUI** is the outstanding new version of the paint program you can use freely from the **AUI** SuperDisk 31. Cloanto, its creators, have arranged a superb offer for **AUI** readers to get the Personal Paint 4.0 at a specially discounted price.

## AUI SPECIAL REPORT

## 64 Think Print!

Alex Standish leads **AUI**'s team of Gutenberg Gaspers into a two-dimensional investigation of what printers can do for you and what you can do with print. Included in this **AUI** Special Report are info on the printers and the companies who create them, mini- reviews of the hottest printers around, easy access to the jargon plus two full page test drives of the latest and possibly greatest to hit the Amiga scene, the BJ 600 and an exclusive report on the true Amiga version of Primera, a sensational colour printer like none you have seen before. All you need to know about printers - don't buy one or upgrade your present printer until you've read Think Print!

## 61 Subscribe to AUI

Save the walk to the shops and avoid disappointment when they're all sold out. Get the postie to bring **AUI** to your very door.

## 114 Competition

Win the terrific Vidi.24RT!

In this **AUI** there is a letter from an American Amiga user group bitterly criticising Commodore and the Amiga press for the failure to support the Amiga. There's also a report that Commodore have brought out, in the UK, a new pack for the Amiga CD 32.

Why have Commodore brought out a new four game pack for the CD 32? Because they hope to sell more. If they'd thought the previous two game pack was doing enough they would have left well alone. However, Amiga CD 32s sold have probably been somewhat fewer than CBM had hoped but more than many people expected. Best estimates are, by the time you read this, some 75,000 Amiga CD 32s will have been bought by the public in the UK with perhaps another 50,000 in the rest of Europe. Though Commodore will have sold far more into the wholesale and retail trade. When the Amiga CD 32 came out there was very little software for it. There's now much more and all the big guns in the games field are moving into the machine. That's what is necessary for it to succeed in Europe and in its coming launch in the USA.

What CBM did is, because of their financial problems, they had to do. They launched the machine before the time was right but made their campaign pretty well work. To have sold as many as they have in the face of fierce competition with only a handful of titles ready is by no means a small achievement.

But eventually it's the public that decides if a product is what it wants. And the product, probably to Commodore's surprise, this year-end selling season has been the Amiga 1200.

This was the machine, above all others, that the public decided it wanted. I don't think Commodore had anticipated the public demand - any more than they did at the end of 1992 when they launched the 1200. 32 bit time is certainly here but maybe not yet added to CD.

"Build a better mousetrap," said Benjamin Franklin, "and the world will beat a path to your door." Not entirely true these days. There are too many competing mousetrap companies.

Commodore is not and never has been completely in control of its own fate. Its often stronger competitors affect the market. Commodore, as any organisation, makes mistakes and misjudgements. The public chooses to do what no-one expects... Timing of a launch or a campaign is influenced by totally unexpected circumstances.

In the NewsFile we report a senior IBM man saying "People do not plan to fail, they fail to plan." That's ironic considering his own company has lost so many billions in the last few years that IBM's losses make CBM's appear tiny.

Commodore deserve plenty of criticism. They may have messed up in many ways. In 30 years in the business, they could surely have done better. But they could have done worse. CBM's Amiga 1200 is outselling anything in its class. The Amiga CD 32 has bitten into the market, it could swallow it by this time next year. There could be other surprises in store.

CBM don't command the computer market - often, like all of us, they don't even command their own world. To anticipate trends in computing is almost impossible no matter how clever you are at planning. But, so far, Commodore and the Amiga are still in there slugging it out. We'd all love them to be on top all of the time but in this almost unplannable world, survival itself isn't a bad achievement.

Antony Jacobson  
Managing Editor

**ENTERTAINMENT NOW!**

Combat Classics 2 (Empire), Black Crypt (Hit Squad/ Electronic Arts), Fury of the Furries, Dogfight 50 years of Aerial Warfare (Microprose), Rise of the Robots (Mirage), Magic Boy (Empire Soft), Campaign II (Empire), Zool 2 (Gremlin), Cosmic Spacehead (Codemasters), Settlers (Blue Byte)



# AUI!

# SuperDisk

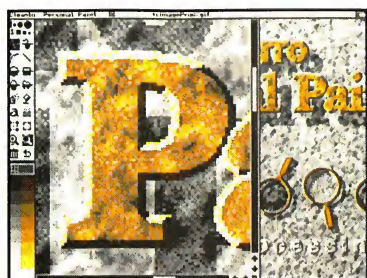
**Two SuperDisks this month on AUI! Your first disk contains a complimentary version of Personal Paint, in conjunction with Cloanto of Italy, exclusively for the readers of Amiga User International.**

## Personal Paint

The Complete Commercial Program

# 2.1

**P**ersonal Paint 2.1 (PPaint) is a full blown commercial paint package, but it's yours absolutely free with **au!** Published at £59.95 - and good value at that - PPaint works a little like the other paint packages on the market, but PPaint also has some clever tricks up its sleeve which make it well worth having.



PPaint in magnify mode.

### powerful features

If you've used DPaint then you'll soon get into PPaint and begin to explore its special features. PPaint makes full use of AGA machines,

so you can have up to 256 colours on screen. All Amigas can enjoy the added bonus of PPaint's Floyd Steinberg dithering which makes pictures appear to have more colours than they really possess.

If you're not happy with just painting, then why not try PPaint's huge array of image processing tools? There's blur, darken, lighten, emboss, negative, rise, randomise, sharpen, shift, texture, tint and watercolour. But it doesn't stop there! You can actually edit current effects or create your own new effect from scratch!

There are six example pictures on the disk for you to load in to PPaint and play around with. Note that the pictures are in the GIF file



A 256 colour image loaded into PPaint.

format and are not IFF. That's because PPaint can read and write other file formats too. It supports IFF images (2 up to 256 colours), PCX, GIF, and it'll even save the image as a C source file for programmers to use!

### loading

Your Personal Paint disk is not auto-booting because so much was crammed onto the disk! You should load up Workbench first by

**All Amigas can enjoy**

**the added bonus of**

**PPaint's Floyd**

**Steinberg dithering**

**which makes pictures**

**appear to have more**

**colours than they**

**really possess.**

using your Workbench disk or hard disk.

You can launch the multi-featured Personal Paint simply by double clicking on its Workbench icon. It runs on any Amiga with 1 Mb of RAM (ideally, Chip RAM). In order to exploit fully the disk capacity, Personal Paint itself has been compressed. On slower systems, decompression may slow down the initial loading of the program. To create a

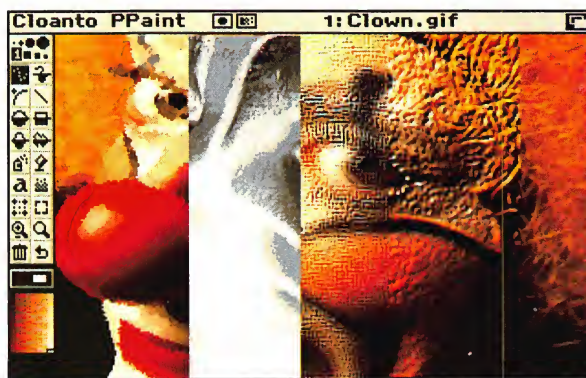
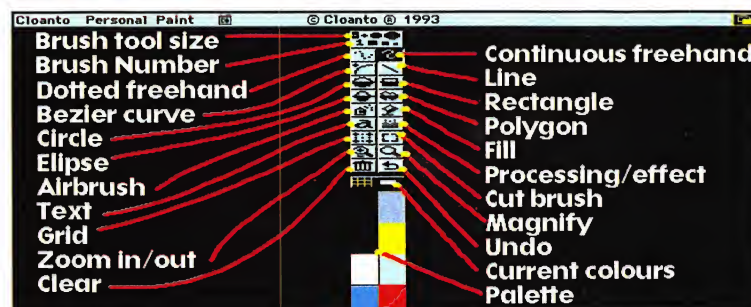


Image processing within PPaint.



A quick guide to PPaint's tool box.



# 31

decompressed executable file, type the following command in a Shell window:

## getting started

PPaint:Utilities/Deplode

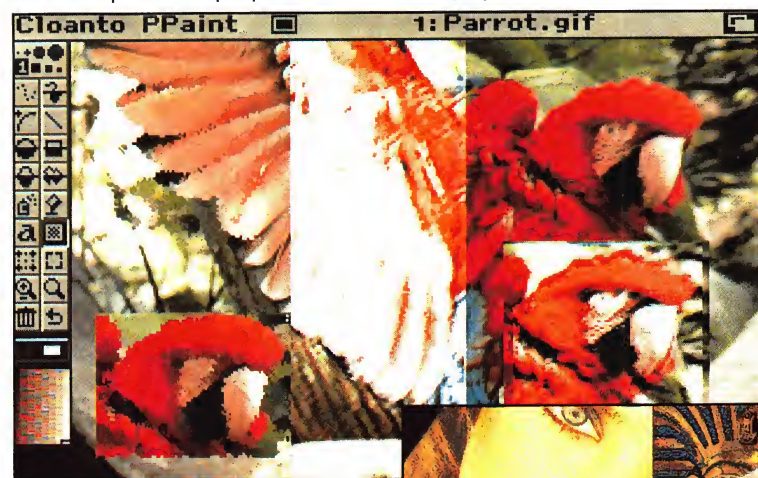
PPaint:PPaint Destination:PPaint

After you've loaded PPaint, why not load up an example picture from

is recommended to make a backup copy of the program disk before experimenting with functions which write data. you never know you might become over enthusiastic with your undos and accidents do happen.. So be safe and make your back up copy before you start experiments with this highly entertaining program. Though if you do have catasrophe strike, we might take pity on you if you sens your original Coverdisk of Personal paint to us and if you're very polite a replacement copy will be sent you. But we'd rather you took the appropriate precautions and didn't have the problem.

## gadgets

The gadgets on the tool bar, which is displayed on the left of the



Trying out my own home made processing effects!

the disk? Select Load from the Project menu or press "L" on the keyboard as a shortcut.

The "Pictures" drawer contains several 256-colour images, plus examples of color reduction, color merge and image processing entirely created with Personal Paint. The program automatically reduces the

If you're not happy with

just painting, then why

not try PPaint's huge

array of image

processing tools?

number of colors of an image if the computer on which it is loaded doesn't have an AGA (Advanced Graphics Architecture) chip set. In case of color reduction, the "Settings/Color Remapping/Floyd-Steinberg" option usually gives the best results.

It is very easy to explore Personal Paint by choosing from the variety of menus and gadgets. It

Lots of pictures were merged together and converted to just 16 colours!

screen, may respond differently depending on the pointer's position over the gadget (upper or lower half). It also depends on which mouse button is used (left or right), and the number of mouse clicks (cycle gadgets).

For example, the tool to the right of the "a" text editing symbol activates the image processing functions. If it is selected with the right mouse button, a requester appears to select different image processing options. The area on which image processing is to be applied can be delimited by



This lets you reduce the number of colours used in the current image.

dragging the mouse (i.e. moving it while the left button is held down).

FONTS: directory. All versions of Personal Paint and PFM2 also search for the font in their local directories, where the font is normally copied during automatic installation.

You should be able to enjoy many hours of fun and creativity

## options

The "Settings/Language" options, in this version of Personal Paint, can be used to set the user interface language to either English, German or Italian.

Personal Paint and the Personal Fonts Maker Color Extensions normally share the same Personal.font for their user interface. The font itself has been upgraded a few times. If you have

The "Pictures" drawer

contains several 256-

colour images, plus

examples of color

reduction, color merge

and image processing

entirely created with

Personal Paint.

using your free copy of PPaint. It's a very versatile and talented program which compares very



Brush scaling and colour merging from 2 different

both programs already installed and experience difficulties because version 2.1 of Personal Paint requires a different version of the font, just remove the font from your

favourably with anything you can buy. Don't forget that you can upgrade to version 4 for a special price. See elsewhere in *au* for full details. **a**





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200Mb version - £1939    540Mb version - £2299  
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## AMIGA A4000/030

The same specifications as it's big brother but designed around the 68030 processor. The A4000/030 comes with a Hard Drive, 1+1 RAM and WJB 3.0.

(FOR 2+2 PLEASE ADD £69)

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130Mb version - £969    426Mb version - £1199  
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The A1200 sports many of the features of the A4000 series. Based around the 68020 processor with 2Mb of RAM and WJB 3.0 as standard. A full range of Hard Drives are also available for the A1200.

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60Mb H.D version - £445    200Mb H.D version - £548  
85Mb H.D version - £468    256Mb H.D version - £578



## DESKTOP DYNAMITE PACK

The desktop Dynamite Pack contains 5 pieces of software written specifically for the AGA chipset, which includes DpaintAGA, WordworthAGA, Oscar and other with a total street value of over £300. (PLEASE ADD £40 FOR DTD PACK)

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HEWLETT PACKARD	
HP 500C	£290.00
HP 510	£246.00
HP 550C	£490.00



# 32

## addresser

Why bother keeping names and addresses written down in a book which can easily be misplaced or stolen? Addresser keeps a record of all your friends names, addresses and telephone numbers with extra bits of information too.

Because Addresser is a computer program it can easily sort names into alphabetical order or

given in the USA at the end of meals in Chinese restaurants. Pity they don't do it this side of the Atlantic? This program will make up for it. What the program gives you are not strictly fortunes but are normally quotes or jokes of some kind. The program is quite flexible so you can set various parameters with which the program will work.

If you have speech capacity on your Amiga (most 1.3 and 2.x Amigas have) then it can speak the fortune instead of printing it out on your screen. (The voice will probably sound like a Confucian robot!) The instructions on the disk tell you exactly how to go about creating your own fortunes and how to control the program. If you press "a" while the Fortune window is open it will give you another fortune to read. Have fun.

Addresser 2.0

First  Last

Company

Street

City  Prov/State

Country  PC/Zip

Home #  Bus. #

Note

Marked ☒ Group #1 ☐ Group #2 ☐ Group #3 ☐

Format ☒ Default Group #4 ☐ Group #5 ☐ Group #6 ☐

Store all your girlfriends' or boyfriends' names with Addresser.

recall a name instantly. It's easy to use but if you do have any problems I suggest you read the documentation which comes with it on the disk. New data you type in is saved automatically before the program quits.

## the fortune cookie program

This little program gives you a random thought for the day, hour,

Fortune number #128

"If a machine can be made so that an idiot can use it, then only an idiot will use it."  
-- Tadao Ichikawa

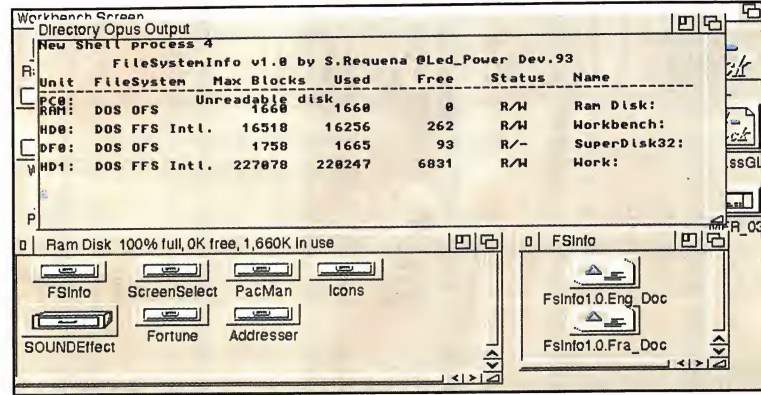
Fortune

What's your fortune? Confucious he say "For Amiga user wisdom come from reading good magazine like AUJ."

or whenever you want a giggle. Over 400 fortunes are on the disk and you can even add your own too! Fortune Cookies are often

Cache, International, and MS-DOS options!

Running FSInfo will tell you which system all of your mounted



These are the File Systems I'm using.

drives are using, including floppies, hard drives, RAM, RAD, and whatever else you've got bolted onto your machine.

## icons

Drawing your own icons can be fun but it takes ages to design them! Here are 37 ready-to-use

of the graphics. Large monsters, mazes and power pills with new power-up icons.

Edgar Vigdal of Norway has done a brilliant job in writing his own version of this immortal game. You can control Pacman with either a joystick or cursor keys. It runs on all machines, but 1200 and 4000 owners will have to revert to the original chip set and 040 owners should disable the cache.



37 varieties of icon ready for you to use.

icons which can be loaded into Workbench's Icon Editor program.

These aren't animated icons nor are they 16 colours. But they are very well drawn and can be used on any Amiga, although 1.3 owners may have to remap the colours.

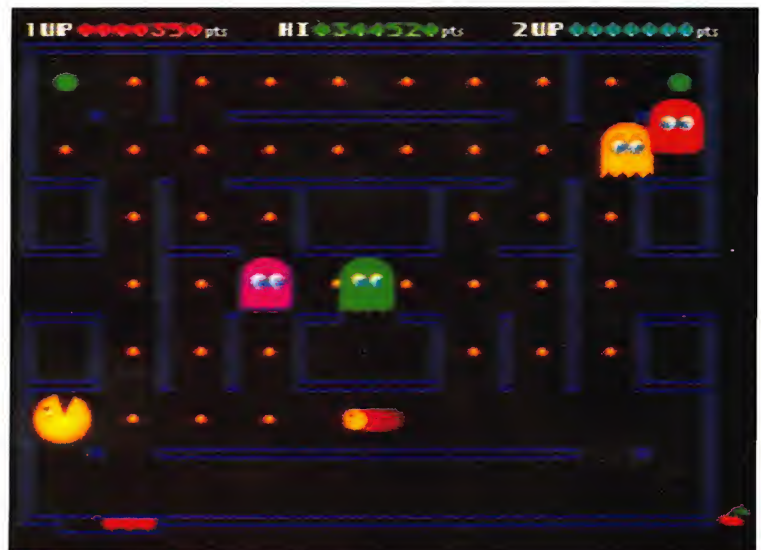
To revert to a different chip set on WB3 machines, reset the computer while holding down both mouse buttons. A screen will appear. From here, select Screen display options and then click on either ECS or original. Now select Boot.

## deluxe pacman

The old arcade favourite comes to the Amiga after a major beefing up

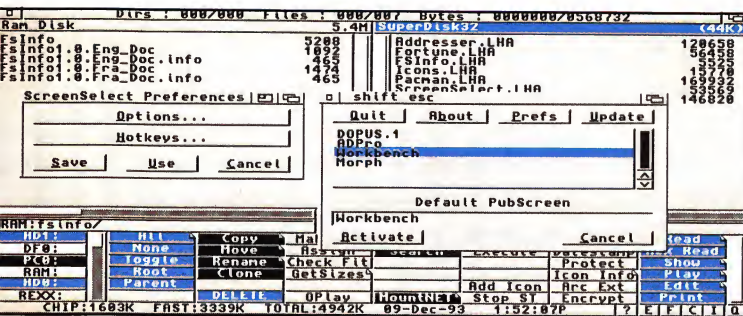
## screenselect

You know how it is. You're running a dozen programs, each with their



Beefed up Pacman for the best machine in the world!





ScreenSelect can pop up almost anywhere!

own screens and you have to use Amiga + M to flip through the screens until you reach the screen you want to use. PCs and Macs just don't have this problem - because they don't multitask like your favourite machine!

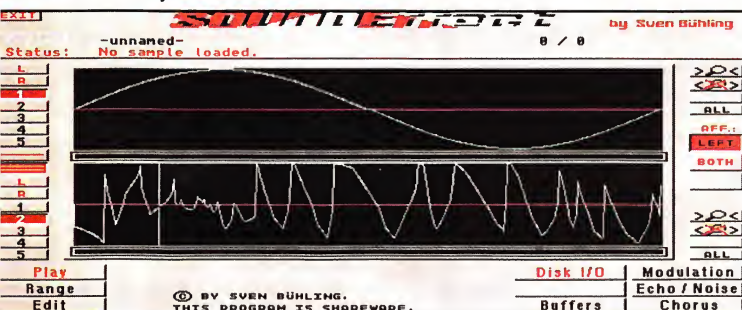
ScreenSelect (Workbench 2 and above only) can be called upon (using Shift + Escape) to provide you with a list of all of the currently running screens. All you do is click on the name of the screen that you wish to travel to and BANG! There you go! There is a Preferences program which comes with ScreenSelect that allows you to customise the program for your system. It's best to read the documentation which is on the disk in order to understand exactly how to get the best from ScreenSelect.

We advise you to copy ScreenSelect to your Workbench

special features. Here are some of its main features: Stereo or mono, amplitude and panorama modulation which can be drawn with the mouse, echo and reverb effects, free hand editing, mixing of up to 8 samples, chorus effect, filters, and many more.

It's a fully working program except for a few limitations. It's shareware, and all registered users will be given an upgrade to a 100% functional version. It's worth considering after you've seen how good the program really is! Please read the documentation on the disk to find out how to use SoundEffect properly.

Please note that this program requires the maths libraries which are found on your Workbench disk. To run SoundEffect you must always boot your Amiga from either your Workbench disk or your hard drive.



SoundEffect lets you draw your own sounds too!

disk (or hard drive) because this program is a commodity and needs the files contained on your Workbench disk.

## soundeffect

SoundEffect is a powerful sound editing program with some very

## programming tips

It's that bit of the disk which has been devoted entirely to the wonderful Mr Paul Overaa. It's an example file from his regular programming pages within **au!** itself. There's an executable program and the source code too. Enjoy!

## NO DISK?

Yes, consult your newsagent! But we've had so many complaints about readers not getting disks that we're trying out a new idea. We can't be responsible for what happens at the end of a long chain of different organisations who handle the magazine when it leaves us, especially outside of this country. We know that someone appears to be taking disks off copies of the magazine in some countries but we don't know whether they are being stolen or taken off as a protection against a large sales tax having to be paid.

So what we propose is this: if you live in the U.K. you will have to consult your newsagent and get him/her to contact the wholesaler etc in the usual way. However, if you are outside the U.K. we want to help you get the advantages of the SuperDisk so if you send us £1 in sterling (International Money Order etc) to cover postage etc and we will send you the month's SuperDisk. Okay?

## Faulty Disk?

In the event that your **au!** coverdisk fails to load (because of a read/write error etc), please return it to the following address for a free replacement. Allow 28 days for delivery.

**au!** Faulty Disks, 138 Lambeth Walk, London, SE11 6EW

Don't forget to include your name and full postal address in BLOCK capitals. Collector's tokens from the back of cereal packets are not required, thank you.

## Burning Chrome BBS

Thanks to Simon Gardner who helped us to obtain some of this month's programs. If you have a modem you can contact Simon's BBS on 0428 727060 (19.2K HST DS+ V32bis). This is not a voice number so you can't make funny noises down the phone! This is a modem only number!

## shareware

Just a brief reminder that some of the programs on our Coverdisk are Shareware. This means that you can try them out, but if you regularly use them you should send a registration fee to the author. Registration fees are between £5 and £20 and sometimes the author will send you the latest version in return. You can send an International Money Order, or preferably a cheque but many authors don't accept cheques if they are outside the UK. If you want to risk sending cash in a registered post, it's up to you. We wouldn't advise it but it's your money...

## Read the instructions!

If you get stuck with a program then you will probably find the answer somewhere in the documentation. Therefore it's best to read the documents on disk that usually accompany each program.

If for some reason you can't access the program documentation then either the default tool is not set to 'more' or there isn't any. To set the default tool to 'more' use the Workbench 'info' or 'information' option selected from the 'icon' pulldown menu.

Always check that the program you are trying to run is compatible with your machine. Also remember that if the program requires any libraries then you should re-boot from Workbench in order to use that program. Sometimes libraries will be on the Superdisk and these can be copied to your Workbench libs directory for use by the programs.

If you get really stuck with the Superdisk then please write in to **au!** rather than telephone. Alternatively, hang on for the next **au!** since we will always report any problems in the following month's issue. If you do write then your letter will receive attention but please, no more telephone calls!! Thank you, have fun!!

## Reader's Contributions

We are always looking for new and original programs to put on our coverdisk. If you would like to see your name and program feature in **au!** then please contact **au!** at the address given in the front of the magazine. Alternatively, give us a call if you think we would be interested in your program (071 487 4284 ext 1071). The shorter the better, under 100k including any libraries - unless it's brilliant! Compiled AMOS programs are welcomed.

## COMPATIBILITY

Angie, Hyper and Tools Daemon will not work with Workbench 1.3. Sorry, the only answer is to upgrade, you don't know what your missing!





# Logic3

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£16.99 inc. VAT.



### Quatro

Classic arcade-style design

- Six heavy-duty microswitches
- Two fire buttons
- Extra-long connector cable.
- Steel shaft

**Model No. JT 154** £12.99 inc. VAT.

### Pinto

Miniature version of Quatro.

Suitable for younger gamers or hand-held play.

**Model No. JT 151** £12.99 inc. VAT.



### Quatro GT

Classic arcade-style design

- Six heavy-duty microswitches
- Extra-long connector cable
- Independent rapid-fire button.
- 3-way autofire facility
- Slow-motion facility
- Two fire buttons
- Steel shaft.

**Model No. JT 155** £16.99 inc. VAT.

### Pinto GT

Miniature version of Quatro GT but without rapid-fire and slow-motion. Suitable for younger gamers or hand-held play.

**Model No. JT 152** £16.99 inc. VAT.



### Delta-Ray

New 'Comfort-Grip' handle

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- Extra-long connector cable
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### FreeWheel

Can you imagine Nigel Mansell using a joystick to control his car around a high-speed track? Probably not. That's why we came up with the FreeWheel. Just plug it into your computer joystick port and experience the real sensation of driving!

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- Uses unique angle-sensitive switches
- Does not need to be mounted or fixed to a surface.
- Extra-long connector cable

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**Model No. FW 123 - Analog FreeWheel for Amiga** £39.99 inc. VAT.



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Soom into Theatre

Special Price Floppy

Integrated Chip

New True Mouse

Sing Along CD32

Prodad

Compiled and Edited by Anthony  
Mael and Martin Witton

# COLOUR Me 24

Seikosha's colour printer range has been extended to include the SL-96 Colour. The 24-pin dot matrix printer uses the optimised printer language ESC/P2 which enables the printer to print scalable fonts with variable heights to give precise graphic output.

Whether printing text or graphics, the SL-96 Colour has a maximum resolution of 360 x 360 dpi to maximise printout quality, and has a maximum speed of 240 cps and 84 cps in LQ mode. With a total of 8 Bitmap fonts and 2 scalable fonts (8 to 32 point), the SL-96 handles single



sheets as well as fanfold paper combined with an auto park feeder to switch types of paper.

Price £249.00.

**Contact: Seikosha (UK) Ltd., Unit 14, Poyle 14, Newlands Drive, Colnbrook, Slough, Berks. SL3 0DX. Tel: 0753 685873.**

Seikosha bringing 24 pins into a colourful world.

# ONCE SEEN

"AmiVR offers video interface and liquid crystal shutter glasses for viewing field-sequential 3D stereoscopic video." Yes, it's like that 3D stuff that Ashley Cotter-Cairns raves on about in his VR article. That is the article isn't VR...)

The system connects to the video output of the Amiga for full colour stereoscopic 3D Amiga graphics. With Animatrix Modeler and AmiVR, 3D modelling can be achieved for Lightwave and 3D objects seen in stereoscopic 3D. The AmiVR synchronizes the glasses directly from the Amiga video signal's sync.

AmiVR1 (for 1 viewer) \$269.00 - consists AmiVR video interface, 1 pair LCD glasses, 1 3D videotape of your choice, power supply, cable and carrycase. AmiVR2 (for 2 viewers) \$369.00 same except contains 2 pairs of LCD glasses and 2 videotapes. (2 videotapes? To be watched stereoscopically?)

As an enhancement there is a StereoPro Amiga joystick interface for

the LCD shutter glasses, providing, say MegageM, high quality stereo 3D viewing of Amiga graphics. It synchronizes the LCD glasses based on software timing signals at the joystick port.

StereoPro is intended for use only with Amiga systems (it has no video port), both NTSC and PAL. Great, they say, for Animatrix Modeler and VistaPro. Price \$199.00 for the interface and 1 pair LCD glasses.

AmiVR and StereoPro each come with several 3D images and games, utilities, instructions for use with 3D capable software, developer library with docs and both NTSC and PAL versions of the MegageM SPX program - all on disk. SPX scripts smooth 3D double-buffered hi-res moving wire objects and scenes with ARexx. SPX comes with example scripts of free running 3D wire scene animations.

**Contact: MegageM, 1903 Adria, Santa Maria, CA 93454. Tel: 805 349 1104.**

# HMV SELLS 'NOT ANY OLD CD'

Home entertainment giant HMV has joined the growing list of retailers to stock Amiga CD32. HMV, which has recently opened Level One games department in their Oxford Street store, will sell the 32-bit CD games console and a wide range of software for the machine in all of their 50 shops.

As we are sure you know by now but just in case you don't, the state-of-the-art CD console plays computer games in 256,000 colours and music CDs in stereo. It is capable of running movies and music videos with the addition of a full motion video module which Commodore is due to release shortly. And will it come at under £200?

We hope so.

# Oh Sixty?

Reports of my death have been somewhat exaggerated, wrote Mark Twain. Perhaps the 680x0 series might say the same... It seems that leapfrogging into the future with Motorola does not necessarily mean that the RISC-based PowerPC chip will eliminate all development on the 680x0 series that we have come to know and love in our Amigas. For AU1 has heard that there is on the horizon - which may or may not mean the second or third quarter of this year - there looms not an 68050 but, we kid you not, a jump into 060 land.

Jim Drew, of Utilities Unlimited the creators of the - for AU1 - almost mythical Emplant board (see NewsFile item in this AU1), is working on an 060 board to go into the 4000 and perhaps even into the 1200 too. If such a development takes place, and we have it on good authority that it is well-advanced, then we should see an Amiga that makes everything, and we do mean everything, around look snail-like.

We are talking here real speed - something around

the 100 MIPS mark which means an all singing, all dancing desktop computer like no other.

It is said that there could be heating problems if such a monster were fitted into a 1200. Not surprising at a hundred million per sec whizzing around the metal!

We hear the lucky distributor in the UK is likely to be Paul Leserf of Blittersoft who when asked about it though seems to merely smile sphinx-like. Price? We'd guess you wouldn't see much change out of a grand.

## Three Dee Oh?

And perhaps even more stunning, there is a interesting rumour that the productive Mr Drew may have in mind a 3D0 emulator for Amiga CD32! If it's true and possible - and the guy who has created the emulation for the MAC and the PC on the Amiga is certainly capable of it if anyone is - then it would be an amusing one in the eue for R.J Mical and Dale Luck who were among the originators of the Amiga and are now key to the development of the 3D0 CD machine. What a fun place this computing world is.



# INVOICE IT! AGAIN

Legendary Design Technologies have told **AUI** that they are bringing out v1.1 of their invoicing package with new features such as the ability to print statements for customers. The calculator now has a paste function, searching has been improved and more options are offered for configuration of the screen display.

Registered owners of previous versions can upgrade to v1.1 for \$7.50, inc. shipping (or free if you bought the product after November 1 1993).

Invoice It! - which we reviewed in December **AUI** - is a business program which provides reports in addition to printing and storing invoices and includes a powerful layout editor that allows control of the invoice printout. With other commercial products for the Amiga, Address It! and dataTax, Legendary Design Technologies Inc., have also released several freely distributable programs.

**Contact: Legendary Design Technologies Inc., 25 Frontenac Avenue, Brantford, Ontario, Canada N3R 3B7. Tel: 519 753 6120.**



The wire drawing still needs filling (mind you it's better than we could ever do).



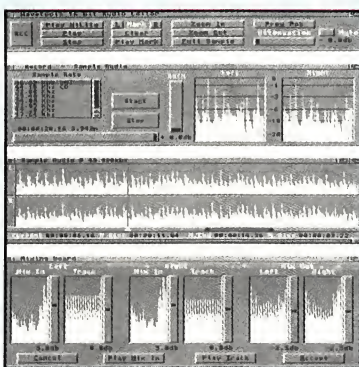
All the old favorites come supplied with the package.

## Hanna-Barbera Animation Workshop

Following the Disney Animation program, we are now to see Hanna-Barbera back a similar title from Empire Software. They claim it is simple to use, yet a powerful tool using an easily mastered icon system. It allows video input, if you have a camcorder and digitiser, so that hand drawn images can be

used. One nifty feature is the "onion-skinning" allowing careful positioning of frames, but for the beginner Hanna-Barbera animations are included together with clip art for you to use. The finishing touches are being made, so look out for a full review in **AUI** soon.

## AWESOME SOUND



Breaking the 8 Bit sound barrier.

Wavetools, a new product released by Digital Audio Designs, is a 16 bit audio card which plugs into any Amiga 2000, 3000 or 4000 and offers high resolution 16 bit CD quality audio for \$350.00. - about £220.

Audio is recorded directly onto any hard disk drive in Amiga compatible AIFF 16 stereo files. Multiple waveform windows may be open simultaneously and audio can be cut and pasted between open files to facilitate building complex audio tracks.

Price around £200.00

**Contact: Digital Audio Designs, P.O.Box 5068, Fullerton CA 92635 0068. Tel: 714 562 5926.**

## NEW AMIGA GAMES MAG!

American Amiga owners have the chance to buy a new Amiga-specific game magazine. Wow! Amiga Game Zone claims to exclusively cover Amiga games and related hardware from both the States and Europe. Amiga Game Zone is to be published bi-monthly.

Now wouldn't it seem to you that this new magazine is a bit late into the market? It may be that the USA is not so "well-equipped" with games mags as Europe and there is a crying need for a new one. Somehow we doubt it, particularly as the games playing Amiga audience there has shrunk substantially in the last few years. As someone said to us recently, "Everyone in the States has 4000s" That may be just the tiniest exaggeration but in principle it's right. People are more serious about the Amiga there. So we wouldn't advise rushing out across the Pond to start a competitor to the venturesome Amiga Game Zone.



Syquest SQ1080

## Tiny Drive Big Possibilities

Syquest has developed a removable cartridge PCMCIA disk drive for palmtops, notebooks, pen-based computers and personal digital assistants. The SQ1080 microstorage system uses Syquest 80MB or 60MB 1.8-inch cartridges. The SQ1080 has a MTBF - and we know what that means, don't we? - reliability

rating of 150,000 hours, buffer size of 32K, and average access time of 16msec. The 80MB cartridge's sustained transfer rate is 1.6MB/sec while the 60MB cartridge's rate is 1.3MB/sec. Syquest's SQ1080 drive uses a Type 111 PCMCIA interface. Price for the drive will be about £250 for OEMs and cartridges will retail at £40.

## INSIDE THE A1200

The third title in the Insider Guide Series from Bruce Smith Books is Amiga A1200 Insider Guide - Next Steps. It has been written to appeal to readers of the original Amiga A1200 Insider Guide, and to act as a stand-alone guide for upgraders to the A1200 who wish

to delve more deeper into Workbench subtleties, AmigaDOS and beyond.

Price: £14.95.

**Contact: Bruce Smith Books Ltd., 106 Smug Oak Centre, Lye Lane, Bricket Wood, Herts, AL2 3UG. Tel: 0923 893493.**

## OKI CALLS IN FEDS

The FBI has been called in to investigate the theft of more than 100,000 computer chips from an OKI Semiconductor plant in Oregon. The chips, valued at over \$2 million, were stolen by five gunmen wearing masks.

Now just a minute. Are those the masks that that put over the silicon before they make the chips? Could the chips just have been removed in a new manufacturing procedure? Perhaps not. But if anyone offers you some chips that have fallen off the back of a lorry just ask the balaclaved salesman if he comes from Oregon.



## NOT JUST FOR THE BIG BOYS

Data communications company U.S. Robotics has told **AUI** that they are publishing a new booklet which gives home computer users an insight into the information services which can be accessed on line using a modem.

Entitled "The Sportster Guide to On-line Services" after the US Robotics personal modem brand, the booklet which has been endorsed by TV personality Sarah Greene and is expected to appeal to a wide range of readers.

US Robotics Managing Director Clive Hudson commented "The modem has moved from being a rather dull technical product to a consumer product with a wide range of possibilities. We felt the Guide would stimulate increased use of the amazing range of services that are out there. It's not just the big boys though. We have included a number of smaller bulletin board operators and we will be offering a hotline for anyone who wants information they cannot find in the booklet".

Three hundred thousand of the booklets will be distributed and it will be available to schools and public libraries.

**Contact: U.S. Robotics Ltd., 224 Berwick Ave., Slough Berks. SL1 4QT. Tel: 0753 811180.**

## SILICA RAMS THREE HOME

Silica Systems has announced three Amiga RAM boards, one for the A1200, another for the A3000/A4000 systems and a CHIP RAM upgrade for older Amigas.

The boards come from DKB - an American Amiga developer and are available now. Prices range from £129.00 for the A1200 RAM and maths co-processor upgrade, £269.00 for the DKB 3128 upgrade 32-bit (ZorroIII) RAM board for the A3000/A4000 and £154.00 for the DKB Megachip - chip RAM upgrade by 1Mb for the A500, 1500, 2000 and CDTV systems. All prices include VAT.

**Contact: Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup Kent DA14 4DX.**

**Tel: 081 309 1111.**



MOs - Cutting prices through taking off from a pioneering position. The plum blossom comes extra.

## GVP ON THE FAST TRACK

Great Valley Products (GVP), who claim to be the world's largest developer of Amiga peripherals, have launched a new A1200 accelerator - the A1230 + Performance Series II (abbreviated to A1230-II, you'll be glad to know.). It is a trapdoor expansion featuring a 50MHz 68030 processor with Memory Management Unit, up to 32Mb of 32-bit RAM, and an optional 50MHz 68882 maths co-processor.

GVP have told **AUI** that the most interesting thing about it is a "unique" feature connector, called the DMA Peripheral connector (DPC). This connector allows users to plug in further custom expansion cards of which GVP

will be launching three such upgrades "shortly". These are claimed to be a range of leading edge Amiga 1200 expansions, which will only work with the new A1230-II.

The DPC is a full DMA interface, allowing data to be transferred between plug-in peripherals and the memory of the Amiga without requiring processor intervention. Other features include 16-bit direct-to-disk sound sampling, real-time video frame grabbing and high performance SCSI interfaces. A 4 Meg version will cost you around £550.

**Contact: Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent. DA14 4DX.**

**Tel: 081 309 1111.**

## ARIADNE, No Bull

Ariadne is a Zorro-II Ethernet card for the A2000, A3000 and A4000. It supports both Ethernet standards, 10BASE-2 (thin Ethernet) and also 10BASE-t (Twisted Pair). You can switch between these two hardware protocols via software. There are 32 KBytes of buffer RAM on board and also an option for a boot EPROM.

Additionally Ariadne offers two parallel ports to connect a printer, a scanner or any other peripheral device. Beside a normal parallel driver two network drivers for the parallel ports are available - one ParNet

driver and a SANA-II compatible PLIP driver, called 'liana device' which enables two peer-to-peer connections to smaller Amigas without any Zorro-II slots.

The network drivers for Ethernet and the parallel ports are both SANA-II compatible so, it is claimed, every network software package based on SANA-II can be used with Ariadne - for example the TCP/IP package AS225 from Commodore or the new Amiga network ENVOY. (This is included with Ariadne).

Blittersoft, the suppliers of the network also have a video

## NO OPTICAL ILLUSION

Fujitsu Europe has announced a price cut for their Magneto-Optical disk drives, with 'Plug-and-Play' subsystems reduced from £1,099 to £850.00. The company told **AUI** that the price reductions were as a result of the "market taking off" (where to?) with MOs moving (should we say "flying"?) from a pioneering technology to an accepted technology - as you can see from Barry McCarthy's review in this issue.

All systems are supplied with cabling, media and device drivers. Without cabling, the subsystem has come down from £999.00 to £750.00. The subsystems incorporate an integral fan, auto-sensing mains power supply and a front mounted on/off switch. The units can be stood vertically or horizontally and have a MTBF (Mean Time Between Failure) rate of 30,000 power-on hours. (MTBF - now there's an acronym with which to dazzle the Quiz crowd.)

The drivers can use three types of media: standard 128MB rewritable disks, optical-ROM which is similar to CD-ROM but is said to give superior access rates; and P-ROM (Partial ROM) which allows areas of ROM and rewritable data to be combined on a single disk.

**Contact: Fujitsu Europe Ltd., 2 Longwalk Road, Stockley Park, Uxbridge, Middlesex UB11 1AB. Tel: 081 573 4444.**

encoder for Picasso II - the now almost mythical board that we are constantly promised but that never arrives - said to offer two additional video ports - one for a standard Composite Sync Signal and one S-VHS (Y-C) compatible port. All video compatible PAL devices can be plugged into the PICASSO II - if it exists -, such as colour TV or video recorder.

**Contact: Blittersoft, 40 Colley Hill, Bradwell, Milton Keynes, Bucks. MK13 9DB.**

**Tel: 0908 220196. (Let the phone ring three times and ask for Paloma!)**



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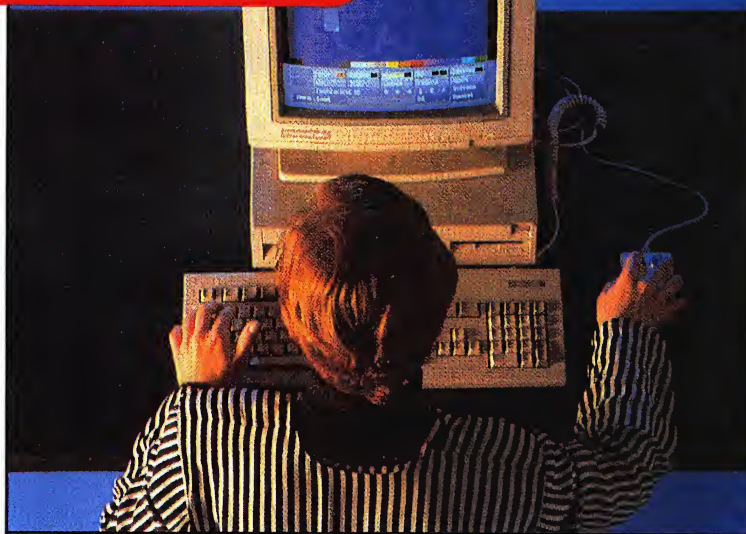
2ManyFonts is a 5 disk set which is compatible with other font collections such as Masterpiece Antialiased, and requires DeluxPaint, Brilliance, or any paint program supporting brush fill or tile mode. Current registered users of Flightpaths will be informed of availability. The expected price is £79.99 and it will be distributed by Meridian Software.

## 100,000 Users?

Novell is claiming to move video from the desktop to the network with the release of Netware Video 1.0 which they say brings low cost stored video playbacks to network users.

The Video 1.0 software enables several users to simultaneously store, manage and play compressed digital video and audio files stored on a NetWare server. There is, claim Novell, no limit to the number of clients which the software can support. Novell has already demonstrated the software running with 96 clients and one US airline is said to be running a version with 100,000 users.

A network with 100,000 machines using video playback at the same time? Oh really?



Upcoming new range from Scala

## TRANSFORMING SCALA

Scala are bring onto the market a whole series of new products.

For entry level video users, Scala have introduced the Scala Echo EE100, to transform the Scala MM300 into a powerful Desktop video solution, combining, they say, clipping and titling in one generation.

They are also bringing out a new video editor, the VE500. It is, they told AUI, a professional video editing system to be introduced early in the year.

Volumes 2 and 3 of Scala Art Library are now available each with a selection of over 50 backgrounds.

ScalaType 2 consists of 15 new fonts created especially for Scala. Two of the fonts are designed specifically for subtitling, while three others are decorative fonts. Arabic fonts are available for the Scala programs with a release of an Arabic version of Scala InfoChannel IC400 due shortly.

All these multimedia products are available through the Scala Club, a new idea for providing special offers and information to users.

Contact; Scala Computer Television, W. Thransgt. 77, N-0175 Oslo. Norway. Tel: +47 22 36 13 38.

## Nutz Alors!

"Mr. Nutz was hailed as a modern classic over a year ago - but admittedly only by Mr. Nutz himself. Now reviewers all over the world have realised that the superstar squirrel was right all along. Mr. Nutz is the fastest, funniest, nuttiest game ever to hit the Super Nintendo and Amiga." Now we didn't say that. Ocean, creators of the egregious Nutz did. But what is perhaps the sharpest comment on the absurdities of the computer games world is the fact that even before its highly publicised launch (or because of it?), the game has already picked up "a highly prestigious Tilt D'Or Award for Best Platform Game of the Year".

We always thought that the French were a logical nation who prized intellect. But giving a game "Best of the Year" before it is even launched conforms more to stupidity or perhaps as described in one of the brilliant Alan Lerner lyrics of "My Fair Lady"... "The French don't care what they do as long as they pronounce it correctly."

TILT, as you probably know, is the name of one of the top French computer games magazines. For a supposed intelligent nation, the French have always had an unhealthy addiction to slot machines and perhaps they are, like sex for Britain, their weak point.

## NEW SHARP SCANNER

Sharp has unveiled the JX-325 colour scanner featuring a fitted SCSI 2 interface and an Adaptec SCSI board. The A4 reflective scanner and film scan unit scans all three primary colours in one single pass and supports resolutions up to 600dpi. ASDG wrote the original drivers for the Sharp JX-100 and the JX-300 which were the first mainstream colour scanners to run with the Amiga. The new JX-325 is to replace the JX-300 and there should be no difficulty in linking it up to the Amiga. Not cheap at £1,495, it is said to be produce really top quality scanning.

Contact: Sharp Tel: 061 205 4255.

## LIBERATED MINDS?

She's making whoopee? She plays games on her computer. He minds. So much so that he is suing for a divorce. The problem is that the games she plays are 'filthy'! In what must be seen as a blow to the male ego, the man in question (in Israel) has described his wife's activities as "technological adultery". The relationship she has formed with her computer has led her to "cheat on me in her thoughts". It might not say much for his performance but from the women's magazines that come our way - no pun intended - it seems that "cheating in thought" may be almost universal among women - and probably men too.

## "QUOTE OF THE MONTH"

"I want to go back to a better class of loser.. who don't pay their bills on home computers"

Randy Travis - Country music song

Apart from the fact that loser doesn't rhyme with computer..it's an interesting thought.

Apparently people who pay their bills from home computers (using Money Matters? Reviewed in this AUI) either are NOT losers or are a worse class of loser than travis likes. We're not sure we'd like to fall into either category. But if home computer users are getting mentions in country music we must be making the world sit up and notice us. Next month aui will run an exclusive interview with Dolly Parton called "My Two favourite Interfaces".



# BIG SPENDERS

By the year 2000, according to a recent report from research company Jefcoat, Europe is expected to have a total consumer expenditure of about £4 billion on multimedia hardware (about £500 million in the UK). Multimedia software expenditure in the European consumer market is expected to total over £6 billion by the year 2000 (£1.4 billion for the UK). Multimedia hardware products are

expected to account for 17 per cent of household expenditure for hardware for entertainment by 2000.

According to Jeffcoat, this consumer market growth will be driven by films and games delivered to TV set-top boxes via cable and/or satellite. Home shopping, although strongly promoted as a technology of the future is as yet unproven, according to Jeffcoat.

# WP STYLE GUIDE

Timothy Goldingham and Michal Bayley have joined forces as writer and illustrator to produce a book which covers all types of word processing and is not tied to any particular software package.

Priced £6.99, the Word Processing Style Guide gives general guidance on document layout and word processing techniques.

It is written for the user who has a word processor rather than a DTP package, knows how to make it perform its various functions, but is limited by using it as one may have utilised a typewriter.

Additionally the book helps with such activities as writing BS5750 procedures and illustrating cartoon drawings.

**Contact: The Wyndham Press, 76 Walker Road, Maidenhead SL6 2QT. Tel: 0628 30108.**

## SCALA Editing Unit



Scala Echo combines functions of pro video editing with Scala multimedia

The Scala Echo package contains a cable unit which connects to the Amiga's serial port. The unit has two cables: one has a LANC/Control-L minijack which connects to the source deck and the other an infrared sensor which exchanges signals with the VCR.

The package includes two Scala EX software modules to control the playback and record functions and the program Infrared

Trainer which is used to teach the software to accept the commands from the VCR.

A Scala clip-art library, with readymade graphics, is included. Over 150 colourful symbols will improve and personalize videos.

## ACTIVA OPEN UP IN UK



Opening up the real 3D market in the UK.

Activa International, creators of Real 3D, have told **AUI** they are opening of a UK office. Andy Jones, the UK support manager, will be pleased to offer technical support or information on upgrades. You can contact Andy via the Activa UK Support BBS (formerly Amiga Swapshop) on 081 986 5964 or via netmail at 2:254/516.1 fidonet. The BBS has

support, message areas, program updates and files for TV Paint, Real 3D Classic and V2.xx, Mediapoint, Piccolo, Peggy, Detail3 and all other Activa products.

**Contact: Activa International (UK), 27a Tremaine Road, Anerley, London SE20 7UA. Tel: 081 402 5770. 10am - 7pm Mon-Fri.**

## REMOVEABLE MEDIA

Fitting a Winchester into a card slot has been made possible by SyQuest's new removeable media disk. The PCMCIA Type III device uses conventional hard disk technology as an alternative to flash memory cards.

SyQuest's SQ1080 microstorage system comprises a PCMCIA drive into which slots a smaller cartridge containing the magnetic storage medium. The drive takes either 60Mb or 80Mb cartridges each with access times of 16ms.

The initial cost of the 80Mb system for the OEM market will be around £240.00 with additional cartridges will cost around £40.00.

## BUSY JIM!

Jim Drew is shipping Emplants to the UK - or so he claims. He's the guy who invented the thing. We've been unable to get one - every time it's promised we're told, just before it's supposed to arrive, to wait for the latest upgrade which will be much better than the one about now!

Drew is currently writing (for Commodore) the replacement for CrossDos called Multi-OSFile System which will read and write Amiga, PC, Atari ST and Mac disks. PC emulation module with DX2/66 speeds on a 25Mhz 040 will be available soon. He says that the PCMCIA version is done and that it is being put out for final production. If it's finished, why can't we get an Emplant then, Jim?

## "QUOTE OF THE MONTH"

David Everett, executive vice president for SyQuest's sales and marketing, said

*"It's like being a mosquito in a nudist camp - the opportunities are endless!"*

We assume he isn't referring to that latest Syquest removable drive launch as a sting?

## 2.0 TVPaint

The latest release of TVPaint from French software house Tecsoft Images is now available from Amiga Centre Scotland at a new price.

This has been drastically reduced to £249.00 inc. VAT. TVPaint 2 package includes four disks with Art/tutorial disk and the following versions: TVPaint.AV-AVideo; TVPaint.Domino - Domino; TVPaint.2410 - CBM A2410; TVPaint.EGS - Various EGS boards; TVPaint.Harlequin - Harlequin/Harlequin Plus; TVPaint.IV - GVP IV24; TVPaint.Retina - Retina; TVPaint.Sage - Various sage boards; TVPaint.VD - VD2001; TVPaint.Picasso - Picasso.

**Contact: Amiga Centre Scotland, Harlequin House, Walkerburn, Peeblesshire, Scotland, EH43 6AB Tel: 089 687 583.**



## Learn About Multimedia

Premier Vision has told **AUI** that they are to run one of their successful seminars on the Amiga. This one is called "Amiga Multimedia and Desktop Video" subtitled - they say - What You've Always Wanted to Know But Have Been Afraid to Ask! Where have we heard that title before?

Aimed at the professional Amiga user, the seminar is based on topics that have been raised by attendees on previous training courses run by Premier Vision in 1993. These problems are dilemmas like should you buy a, IV-24 or a Harlequin. What is Art Department Pro really capable of? Should I really sell my Amiga and take those two delicious blonde and sexy twins Catherine and Victoria to a desert island for the winter. No, sorry that isn't one of the problems that have come up at previous seminars but perhaps at this one...

The seminar will take the form of a series of presentations on video production, digital video, non-linear editing, interactive multimedia and much much more.

The seminar, on February 25th, lasts a full day and for £99 you even get lunch.

This is your chance to get to know how to make the Amiga really work for you.

**Contact: Premier Vision, 31-C Herne Hill Road, London SE 24 0AX Tel: 071 274 4407**

## LIANA

Liana is a peer-to-peer network for connecting two Amiga computers. Liana is claimed to work with all Amigas and the only hardware required is a parallel port into which the Liana cable can be plugged. Beside the internal parallel port of the Amiga, Liana also supports the Vector Connection Multi-IO card. The Liana network driver is completely SANA-II compatible. SANA-II (Standard Amiga Networking Architecture) is now the standard software interface for Commodore's network protocols. So all networking packages using SANA-II are said to work with Liana.

The networking software supplied with Liana is the peer-to-peer networking package Envoy. **Contact: Blittersoft, 40 Colley Hill, Bradwell, Milton Keynes, Bucks. MK13 9DB. Tel: 0908 220196.**

## New CD 32 Pack

Commodore are adding to the attractions of the Amiga CD 32 by bringing out a new pack. The new marketing drive is for the Dangerous Streets pack. This contains - surprise! surprise! - the famed Wing Commander from Electronic Arts and a beat 'em up from Fliar called - surprise! surprise again! - Dangerous Streets. Adding two extra games will surely bring added attraction to the market is the view taken by retailindustry observers.

We wonder if there could be, with the name "Dangerous Streets", any coincidence that there is a certain game called Streetfighter

which has made something of an impact in other formats we are too delicate to mention. But no doubt it is just a coincidence.

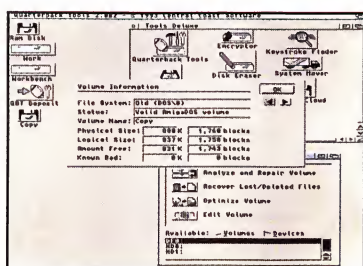
"We're delighted with the CD 32's position against its opposition in the CD sector; the whole market has been much more than people had expected it to be," commented CBM UK's joint MD, David Pleasance.

"Now there's more software about we've been able to put together a very good pack - and we're still confident about the machine."



The price of the Dangerous Streets pack will still be officially £299 but as can be seen from advertisements in **AUI**, you can buy it for ten pounds or so less.

## QUARTERBACK V.6.0



Everybody loves Quarterback and it to get even better.

Central Coast Software, who are owned by New Horizons Software, have told **AUI** that they are making a major upgrade to the popular Amiga hard disk backup and archival utility Quarterback.

Quarterback V.6.0's new features, CCS told **AUI**, include faster software based compression and the ability to schedule unattended backups.

Price: \$99.95. - about £60.00

**Contact: Central Coast Software, PO Box 164287, Austin TX 78716 USA. Tel: 512 328 6650.**

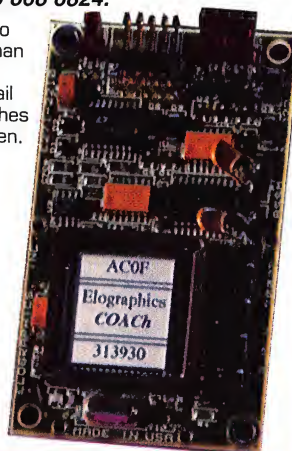
## LITTLE TOUCHSCREEN

Elographics have told **AUI** about what they claim is the smallest high-performance touchscreen controller measuring just 3.3" x 2.1" - the size of a credit card.

The new controller also comes equipped with Elographics SmartSet communications protocol, which, they say, ensures fast reliable communication between the controller and any host computer.

**Contact: Elographics, 105 Randolph Road, Oak Ridge, Tennessee 37830. USA. Tel: 800 868 6824.**

Soon no bigger than the fingernail that touches the screen.



## Cheaper Cooking

The popular ARexx Cookbook which comes with two companion disks has melted down in price. It previously cost £34.95 but you can get it now for just £21.95.

The examples in the book range from simple utilities to constructing ARexx programs with graphical interfaces using Amiga libraries.

**Contact: Premier Vision, 31-C Herne Hill Road, London SE24 0AX, Tel: 071 274 4407**

## CHRISTMAS CHAOS

People who buy PCs as Christmas presents face 'chaos' if they do not ensure they have adequate after sales help and support claim IBM. (well, they would, wouldn't they?) According to an independent study by IBM Personal Computer Company, now a separate bit of Big Blue, eight out of every ten people who buy a personal computer need expert advice on how to operate it. Their results show that helpline services have become a necessity.

As it happens, IBM have set up such a line for before and after sales support for anyone purchasing an IBM PC, who get one years free membership. well, aren't they the generous and kind folks. What about helping out other manufacturers customers too?

## ELECTRONIC DESIGN

The Neptun-Genlock is one of the products featuring Electronic-Design's new look video-editing for the Amiga. "Alphachannel titles can be superimposed on a semi-transparent shadow or background when keying and can be used for the Antialiasing by using semi-transparent pixels framing graphics or titles for smooth edges." (Have we lost you? Perhaps you'd better read that again.)

The Neptun-Genlock is the first Electronic-Design Genlock that can also be software controlled.

**Contact: Electronic-Design, Steffen Kramer GmbH, Detmoldstrasse 2 80935 Munich Germany. Tel: 089 351 50 18.**



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## Branson To Replace Taylor?

Virgin Interactive Entertainment have decided to make a positive contribution to football, following England's failure in the World Cup, by announcing the launch of a sponsorship.

The Virgin Games Schools Football Initiative has been launched to teach school children how to become skillful players. we certainly could do with them!

The Government has agreed to match Virgin's input pound for pound via the Sportsmatch program that a subsidy not a computer game.. In addition, Virgin are running competitions in 'Football In Schools' magazine which goes out to 25,000 football teachers.

## CD-ROM DRIVES

Commodore are working on an A1200 CD-ROM drive. Yes, we know we all know that.. but this, it is rumoured, will be an external attachment using an adaptor through the trapdoor in the A1200 and will contain Fast RAM options so that you can update memory at the same time. The drive is supposed to be exactly the same as in the CD32. We should hope it is too or how will all that software run?

In addition, the adaptor is said to contain the Akiko chip so that the chunky to bitplane conversion hardware we'll also work. MPEG may not be applicable to the drive which would be a a terrible mistake, most people would say. what's the point of having a CD drive if it can't play FMV?.

The 1200 drive is to be followed by a CD-ROM drive for the A4000. This is thought to be a Zorro III board with the Akiko chip. It will probably have an external drive initially and there will almost certainly be an MPEG adaptor on board. Thank goodness for that. There are also likely to a number of third party boards that will become available. Before CBM's? May well be...

The British Computer Society has been submitting evidence to the House of Commons Select Committee about computer porn, after concerns were raised about computer simulated material depicting children under 16. Images appearing on the Internet network on bulletin boards have supposedly been distributed on disks around school playgrounds. There are reports of sexual harassment where animated pornographic images have been sent to male and female workers and students.

The Home Secretary in another of his (simulated?) violent outbursts is threatening new laws which are supposed to be going to take account of the rendering and animation capabilities of graphics software, although bulletin board

suppliers say that the fears about the spread of pornography have been blown out of proportion.

Under the new measures, people with material depicting children under 16 face jail sentences of up to three months and a £5000 fine. Police powers of arrest, search and seizure will be increased.

It is obviously undesirable - is that a wrong choice of words? - for children under 16 to be involved in pornography. (Though how do they tell the age of some girls? We knew one, many years ago, and we hasten to add we never laid a finger

on her, called "Twelve" who was just that age but looked about 20!) But we bet they won't be able to "take account of rendering and animation capabilities of graphics software." And try to prosecute someone for simulation? As is said in the Porn Brokers article in this **AUI**, the less the Fuzz get involved in interfering in our private lives the more tolerant a society we'll have. Or isn't a tolerant society what the Home Secretary really wants?

And "blown out of proportion"? Is that a reference to a over forceful sexual activity or was there a bug in the software?

## FRIENDLY TECHNOLOGY

Amitek have announced a new deluxe Amiga Disk Drive. In addition to being a standard Amiga compatible disk drive, this deluxe external 1Mb disk drive also features anti-click technology, hardware anti-virus protection, enable/disable switch, metal casing and a daisy chain connector.

The Amitek model, Silica say, is built around a high quality Sony drive mechanism and comes with a two year warranty. Priced £59.00 inc. VAT., and available from all good anti-click Amiga dealers. **Contact: Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup, Kent DA14 4Dx. Tel: 081 309 1111.**



Deluxe and with anti-click...

## Don't Let Them Get Away With It

London's Metropolitan Police have launched a new anti-computer crime initiative at a press conference hosted by IBM. Entitled 'Don't Let Them Get Away With It', the drive to wipe out crime is aimed at increasing public awareness and urges them to take steps to prevent data and equipment loss.

John Austen, Detective Inspector estimated that millions of pounds can be saved every year by preventing unauthorised computer access.

This access is now a criminal offence under Computer Misuse Act of 1990 but the Police admit it's very hard to get convictions under the Act. They say that the simplest way of preventing crime is using cheap protection devices.

Personal computer owners can use software protection or disk locking devices which prevent the computer from being booted.

Some operating systems are now having password protection built in so that once switched on the computer has to have a password to continue.

In the USA, Dave Pullin, IBM's UK Software Business Director said, a recent survey showed that data losses are mounting up to \$4 billion (about £2.6 billion) a year. One of the biggest threats is said to be loss through accidents and carelessness such as something as simple as crushing a vital disk which has no back up. And hasn't something similar that happened to us all?

"Most people don't plan to fail," said Mr Paulin, "they fail to plan."

Nice phrase that - could have been a Quote of the Month - but we already had two!

## FMV NOW!

Believe and it shall come to pass... is what Commodore has often had to say to sceptical Amiga journo's; perhaps recently of the much heralded Amiga CD 32 Full Motion Video (FMV) add-on. FMV will let you play video, full movies in fact, on CBM's latest pride and joy.

So it must have been a pleasure for CBM's David Pleasance, joint MD UK, to give the Amiga world positive evidence of the FMV's reality at an end-of-year bash that Commodore hosted for said Amiga press.

Here, folks, is what the little darling looks like.

Price? We'd guess just under £200.





# AMIGA CREATIVE ENTERPRISES SAYONARA!

The Japan Amiga Group (JAG) would like to hear from any European users groups who would be willing to share their disks or make contacts in Japan, as they say there are many lonely Amiga owners in Japan. (For Oh really? read Ah so!)

Amiga Creative Enterprises is a newly formed company in Japan which is preparing to publish a magazine called Amiga Rising. (Shouldn't it be Amiga Rising Sun?)

One of the regular columns will review Public Domain/Shareware and demos. ACE is especially interested in the music modules and demos made in Europe and is willing to publish them if the diskettes are appropriate.

If you want to comfort all those lonely Japanese Amiga users lost among the hordes of oriental Ninentendoers.

**Contact: Steve Vanderhof,**  
3-16-31 Hanenaka, Hamura-  
machi, Tokyo. 190-11 Japan.  
Tel: +81 425 79 0389.

## ZOOM INTO THEATRE

Zoom Theatre claims to be the only theatre company to make extensive use of the Amiga for its theatrical performances. They use three Amigas to produce graphics and animations for their shows which are projected by a LCD Video projector onto a screen built into the set.

All the work is produced in the studio which consists of an Amiga 4000 with OpalVision, an Amiga 1500 with GVP 030 board and an Avideo board and TV Paint, plus an A500+ and KCS to control an M1 synthesiser and an EPS sampler. Genlocking and chromakeying are via a G2+ and an Illusion onto Hi8 video and mastered onto SVHS for playback during the show.

You can see the effects at workshops and demonstrations Zoom produce for schools and festivals.

**Contact: Zoom Theatre,**  
Balintraid house, Invergordon,  
Ross Scotland. IV18 0LY.  
Tel: 349 853943.



## SPECIAL PRICE FLOPPY

Bargain of the year - already? - according to Cumana, is the CAX354 3.5 80 track double sided floppy disk drive, offering 800K of formatted storage capacity for the special price of £49.95 inc. VAT & delivery.

Compatible, they say, with all Amigas except the A4000, the CAX354 offers a fast average access time of only 95ms. Track-to-track access time is 3ms and the settling time is 15ms. Rotational speed is 300rpm. It has a durable plastic case, measures just 104mm wide x 32mm high x 203mm deep and weighs in at only 700g. The drive has a 12 month warranty and a 30 day money back guarantee.

**Contact: Cumana Ltd., Pines Trading Estate, Broad Street, Guildford, Surrey. GU3 3BH. Tel: 0483 503121.**

## INTEGRATED CHIP

Integrated Information Technology has announced a complete video subsystem on a programmable chip. The company says it could massively cut the cost of videoconferencing systems.

According to David Harper, IIT's Managing Director, the integration of these functions on a single chip will drastically reduce the price of these systems. "We want to see millions of video phones or video conferencing systems - we want them on everybody's desktop. You can switch from one standard to another, and the incremental cost of having MPEG capability is virtually zero. The personal computer application is really the ultimate application - if you look at the end of the century, the majority of videophones will be desktop based".

The chip will be available in sample quantities early 1994, with speeds ranging from 20 to 66MHz clock rates. An 80MHz clock version will be available later in the year. In quantities of 1000 the cost will range from \$140.00 to \$400.00 depending on speed.

Customers of the company's earlier processors include Sony, AT & T and VTel.

If everybody sticks to the

MPEG standard there is no reason why the Amiga shouldn't be hooked up to video phones etc in the way Harper describes.

Hello, this is your Amiga calling. Hey, you're still in the Office. And who is that lying on your desk top, you monster?

## SING ALONG A CD32

Arbiter Leisure proudly announce that they claim to

## PRODAD

BVCC has told **AUI** that it has - yes, you guessed it - the exclusive distribution of ProDaD software to the UK. (We ahve, if anyone is interested, the exclusive distribution of the news in **AUI**!) ProDaD are the creators of Adorage v.2.0e and the upcoming ClariSSA - an animation processing program for the creation of animations in SSA format from single frames rendered by Imagine.

Once converted to SSA format, these animations can be manipulated in many ways and run an average 1.5 times faster than standard ANIM5 anims.

**Contact: BVCC, Suite 10 46 Windsor Road, Ealing, London W5 5PE. Tel: 081 567 4623.**

# New True Mouse

GoldenIMAGE told **AUI** they have improved their Mega Mouse 400 by featuring 400 DPI; Micro switch Buttons; rapid and smooth movement. It is compatible with all Amigas and comes with a 12 month warranty - for £14.95.

At £34.95, GoldenImage offer The New True 300Dpi Optical Mouse. (What about The Old False One? We didn't hear much of that, did we?)

"New True" features "True" optical design with, they say, ultra high 300 Dpi resolution for fast, smooth and accurate movement (What other kind of 300 DPI can you have?) "New True" has no moving parts but has "effortless" finger-tip operation with micro-switch buttons. It comes with a tough, "true" (What else?) metal optical mouse mat and also has 12 months warranty.

GoldenImage also told us they have what they claim to be the New (Why not true?) Improved Crystal Trackball featuring a two-colour shining Crystal Ball, supporting auto fire and key lock function. It has the additional feature that the colour shines at the touch of the ball now as opposed to shining when pressing the buttons - all for £34.95. Wow!

**Contact: GoldenImage (UK) Ltd., Unit 12a, Millmead Business Centre, Millmead Road, London N17 9QU. Tel: 081 365 1102.**

be the exclusive distributor for DK (Daiichi Kosho) Karaoke software throughout Europe. Wow! (Do you know what I want to be when I grow up, Daddy? No. not a train driver or Manchester United's goalkeeper. I want to be an exclusive ditributor for DK! Or as the Jewish mother shouted as she ran along the shore, "Help, help! My son the DK distributor is drowning!")

A range of 20 disks are available for the CD32 which are CD graphic bringing the words onto screen. The titles sell for between £14.99 and £15.99, and are available in branches of Dixons, Tandy and Currys.

**Contact: Arbiter Leisure, Wilberforce Road, Lodon NW9 6AX. Tel: 081 202 1199.**



# AREA FANTASY

Everyone has seen images of sweating teenagers 'immersing' themselves into virtual worlds filled with robots and monsters, wearing pseudo-crash helmets and data gloves. If you haven't, then you obviously locked yourself in a cupboard a couple of years ago since VR started to be news.

The debate sprang up almost as quickly as the VR centres; could immersing yourself in another universe be addictive or otherwise harmful? Does killing a virtual human make you a virtual murderer? Would hundreds of Hungerford-style tragedies be triggered, by minds confused about the difference between the virtual and true realities?

What not many people realise is that VR can do a lot more than just send you balmy - sorry, entertain you. With the tempting goal of saving themselves millions of research and development pounds, companies are now working hard to harness VR's abilities as a tool - which may well be mixed with what reaches us in our homes.

## realistic

The overwhelming presence at this year's VR Conference and Exhibition, held recently in London was large, big spending industrial companies. Sega alone flew the entertainment flag, revealing its plans to bring VR into our homes by Easter 1994. (Oh really?) But the most interesting subjects and products were those dealing with VR as a powerful addition to a company's design, research and promotional resources - and by extension, really into our own lives.



LCD glasses enable VR 3D viewing.

Jim Humphries, Chief Engineer at Sterling Software, talked of his company's work with NASA to develop VR for use in the training of astronauts. As early as 1984, work was underway to create a cost-effective, three-dimensional field of view display. For this, if you move your eyes instead of your head, you can still see realistic objects; if you

move your head, these objects are redrawn to give a convincing impression of 'reality'. The system also had to be lightweight.

Sterling created a virtual cockpit, adapting a standard crash helmet to incorporate LCD screens. These gave a 120 degree field of view display, which was not quite perfect but still very impressive for its time. The company called its system VIVID, the virtual visual display and it sent an excited Chinese whisper through the American media.

Now working with NASA, Sterling redesigned the helmet and made it into a face mask. This looked much like today's visors in the arcades. Although the vector graphics were fairly basic, they were considered realistic enough to be used to train astronauts for simulated dangerous missions and situations. Sterling was also one of the first companies to develop a data glove, allowing interaction with the virtual world for the first time.

## ford prefect

Sterling then used its experience to tempt in one of the biggest manufacturing companies in the world - Ford. Like any other car manufacturer, Ford's designers and engineers used to take as much as

five years to produce a new model of car. The main difficulty was that designers and engineers were working in separate directions. A designer would come up with an idea, the engineer would build a prototype or model and then point out the flaws.

VR brought them closer together. By designing a virtual car, the designer could see what was wrong - or right - with the plan from the outset.

Engineers were



Amiga-based Virtuality - once known as W Industries was only a al presence

brought in at the earliest stages to oversee the design from their point of view. Finally, both teams could explore the design in a VR environment, testing it for problems and making changes - and all without a single model being built. In this way, the lead time for development was cut by as much as 60%.

Trying out the system is an extraordinary experience. You can't drive the car but you can do everything else including such apparently simple but really quite complicated actions as opening the door and sitting behind had grasping the steering wheel. The effect is eerily real - nothing virtual about it.

If the savings in time haven't impressed you, perhaps the \$2 million pricetag on every prototype model built will.

## curve

The main problem facing companies wishing to save themselves R&D

millions is the initial cost of incorporating VR into their structures. One speaker at the Conference was Professor Robert Stone, of the Advanced Robotics Research Centre (ARRC) at Salford University. His company specialises in helping other firms to bring VR into practise and train their staff to take advantage of its unique benefits.

Initially funded by the Department of Trade and Industry, ARRC has worked closely with companies like Rolls-Royce, North-West Water and ICI. A single R-R aircraft engine prototype costs £1 million to build and the benefits for companies using ARRC don't stop with cost savings.

"We've already beaten the learning curve," said Professor Stone. "Companies can come to us and draw on our expertise. We've been through the VR transition the hard way, so we can save them millions of pounds and years of headaches."

One new customer on the company's books is the Co-Op group. ARRC has designed them a virtual



## Ashley Cotter-Cairns' grasp

**on reality falters as  
helicopters and fantasy  
girl friends start jumping  
out of the screen.**

# LSY?

supermarket, complete with virtual tills, packets of cornflakes and tins of beans! This model was created to allow the Co-Op to try new store layouts, without actually shifting shelves about.

ARRC's message was that almost any company can save itself time, trouble and money by using VR to help with its design and research projects. And that it would be more than happy to help...

### consumers

Sega was flying in the face of the overall "VR for Industry" message, by showing an early prototype of its proposed home VR system. The company's Director of Software Development, Mike Brogan, said that the units would make their way into British homes by April 1994. No firm price was available, but the unit's not expected to sell for more than £100.

This announcement comes at a time when concern over videogame safety is at a peak. Recent reports that epilepsy could be triggered by computer games were largely exaggerated, but taken seriously enough for companies to start printing warnings in their product literature. And recently, concern over use of VR is growing, after some people reported dizziness and shortness of breath after being 'immersed.'

Certainly there's a place for affordable VR in the home. There are rumours about a VR unit for the new Amiga CD32 and you can bet your last thrup'ny bit that, if Sega has made one, Nintendo is working on it.

### adults only

But VR isn't all about immersion and sweaty face masks. In America, adults-only CD-ROM VR games are currently the rage, with Virtual Valerie being perhaps the best-known 'soft

porn' VR title to date. Players get to choose her underwear, or even remove it, before making the sexy spritette pump (some iron). ( See Porn Brokers page ??? in this *au* ) Controversial titles like VV and concerns about the dangers of over-exposure to VR may keep home units



That's how it look to to the viewer - but you have to have the glasses

from being fully accepted for some time to come. But, from the quality and variety of the products on display at the event's exhibition, VR has certainly carved itself a niche in industry. Wild Plams, Oliver Stone's recent futuristic epic on TV, made the point that VR can bring all sorts of experiences, including some rather kinky sex ones, right into the sitting - or bed - room in the not too distant future.

### indispensible

You might think that Gunship 2000 is the closet you'll ever see to a virtual helicopter. But Westland System Assessment, a company set up by the Westland group, has a VR project which will make you think again.

When a car dealership wants to impress potential customers, it employs someone to give their stock

a polish, runs up some tricolour bunting, perhaps offers interest-free credit terms and takes people for a test drive. But when a helicopter manufacturer such as Westland wants to impress potential customers, it has to organise an event which shows off a whole range of the chopper's abilities. This can cost a lot of money.

There seems to be a golden figure in VR savings: Westland say it can cost a cool £1 million per demonstration event organised. Great if the customer buys a 'copter or two but no event is possible without rehearsal. Guess what? A full rehearsal costs the £1 million a time as well. Luckily, systems like the Freedom series from Evans and Sutherland can produce high-quality rehearsals without costing companies seven-figure sums. An example of such a rehearsal was running at the exhibition. If any changes need to be made, these can be done before any major dosh is parted with. And the whole thing can be put together on a not too complicated form of VR for around £20,000. Now twenty grand may sound big bucks to you but for a company, compared to a million... And it must be working for Westland's

order book stands currently around the nice fat £1.5 billion mark. VR can obviously bring home the helicopter bacon.

### we present

TeleVirtual is a company which can promise you a brand new image... as long as you don't mind looking like a cartoon character.

TeleVirtual has a system which takes

a human being, with movement sensors stuck all over his (or her) face, plots the movements made by mouth, eyes and the head and then morphs these movements to a VR image chosen for the screen. The system works by recording the most violent expressions - anger, laughter, sadness - and then animation by 'tweening' (filling in the gaps between the starting point and the finishing point) takes place.

The result is a virtual TV presenter, who accurately mirrors a whole range of emotions and movements. A data glove has been added to allow the character to move a hand and, in theory at least, a whole body could be wired up and morphed to the screen in the same way.

TeleVirtual are already doing this for TV programs with an actor wired up and a cartoon character looking like Tom of the Tom and Jerry ilk snarling away directly at the viewer.

You don't think that's in your field? Well, TeleVirtual don't only do it as seen on TV. They will come to you, if you hire them, and set the whole thing up for any presentation you wish to make. Of course, at their present cost of around £1500 a day it isn't cheap for that special birthday party but for business presentations it could certainly be thought worth the money. After all remember Westland's £1.5 billion..

**ARRC has designed**

**them a virtual**

**supermarket, complete**

**with virtual tills,**

**packets of cornflakes**

**and tins of beans!**

### three dee

And while you're watching TV, why not watch in apparent 3D to make things seem even more real? Ambitron has Cristal Eyes. No, it's not a new version of contact lenses but a 3D recording and playback system which uses LCD glasses to merge the three images on the screen. It was most impressive to stand and see yourself on a screen in true 3D and, if you waved a hand at one of the 3D cameras, everyone watching the screen ducked instinctively as your hand shot out towards them. Or virtually did.

### giant leap

The Virtual Reality 93 Conference and Exhibition really opened many people's eyes to just how big the virtual world is becoming. Though one surprising absence was Virtuality - once known as W Industries - possibly the biggest VR manufacturer in the world with products largely Amiga-based, there were a large number of products on display which really are a giant leap ahead of everything you might have imagined VR to be about. This virtual wagon is rolling much faster than you can even dream. And, as more and more companies jump onto it, you can be sure it can only pick up not so much real virtual but real momentum.

Who knows? Tomorrow your boss could be training you in a VR environment. (Of course I was here at 9.30. Virtually..) And even, don't bet against having a virtual manager. Or perhaps more excitingly a virtual girl friend, not necessarily called Valerie...

Look out for more on the developing virtual universe in future issues of *au*. **a**



**C**ensorship and pornography affect all communication media and with technology now allowing digital images of photographic quality on our monitor screens, the "problem" inevitably involves the relatively new medium of easily accessible computing.

A recent police raid of a Public Domain company yielded a digitised collection of images allegedly deemed pornographic by those who administer the current laws of this country. It seems ironic that a recent issue of **AUI** covered the importance of data protection and privacy, only to have the British police promptly prove that certain people are allowed access to any data they choose, innocent or otherwise, while others, under the justification of the Obscene Publications Act, are not. They showed this by pouncing on the 21 year old PD supplier, working from his bedroom (sic!) who had advertised in **AUI**.

The comment made in the NewsFile in January's **AUI**, asked if there weren't, in the face of an apparent crime wave, better things for the Fuzz to be doing than trying to stop people looking at sex on the screens. It's seems reasonable, don't you think? Channel Four's TV programme quoted it - and frankly it seemed the only non-hypocritical thing about the whole programme and that includes a holier-than-thou statement from another Amiga magazine. (Us, Guv? No, Lord luv us, we'd never let stuff like that in our mag, would we, Humphrey? Hey, Humphrey! Stop looking at that screen and playing with your joystick! We're a games mag!)

Since then there has appeared a report in the daily press of the Home Secretary promising to ban "Simulated child pornography". Like many political promises these days, it might be easier to make than to carry out. For there are no laws that cover "simulated" pornography. Or simulated anything else, in fact. And how far can you go in banning anything? Shall we have the Thought Police of Orwell's 1984 with us soon. (Taylor you've been thinking about simulated sex with

that simulated girl again, haven't you? Haven't you? We are now going to simulate justice and subject you to simulated censorship of your simulated mind!)

## threat

Sierra's Leisure Suit Larry series bordered on the bawdy and was recommended for the older gamer. No cry of "Mrs Whitehouse come and protect us!" went up from the myriad of stockbrokers and the like who played it and made it a huge success on the PC when there were still very few of that machine in the home. Highly amusing and highly risqué, the series was a far cry from the new American craze "Virtual Valerie". Valerie, a cartoon character, invites you in and performs for the user's pleasure. Controversial? Perhaps, but unlikely to cause too much outrage, even this side of the Atlantic. The real 'threat' to our society is in the form of digitised porn, or so we are led to believe. Why should images available in one format, such as magazines or films, be illegal on computers? Why can you walk into a newsagent and buy a magazine that contains material that if included on a disk in another magazine in that same newsagent will bring screams of horror and threats of banning?

(The Editor tells me that a magazine with which he was involved some years back once received a complaint from a teacher, a Miss Nicholson of Eastbourne, that a pair of her young students had got hold of a program on the C64 that showed sexual activity. Shock! Horror! If you remember the 64, it would be surprising that you could tell one sex from the other on the screen! Miss Nicholson was apparently outraged that young people could learn about sex from a computer. What would she think of The Lovers' Guide video now appearing on disk as mentioned below. If she's still around, please contact us Miss Nicholson, the Ed would like your reactions to the program - possibly to multimedia them for the CoverDisk!)

**"Obscene publications? In most countries they think they're a waste of the fuzz's time. Funny country this; what on earth has it got to do with us what anyone watches on their monitors?"**

*- Amiga User International*

# PORN BROKERS

**The quaint English tradition of hypocrisy is ever with us. Is it or computerised porn the bigger danger?**

**David Taylor and Anthony Mael force themselves to conduct an explicit investigation.**



Arrest that Amiga pervert!



Why police, kindly remove his trousers sorry, his Amiga!





The question does not seem to concern computers as much as personal liberty. To adapt Voltaire, I may disapprove of what you watch, but I will defend to the death your right to watch it, as it were.

The issue might not be the availability but the concealability of computer software. The older generation, as a whole, are so much less computer literate than the younger that parents are more often than not baffled by the system and leave their offspring in the belief that it's all harmless fun. Children can and do obtain material to which they are not legally allowed access. Even in a household where parents are computer buffs, a disk can be innocently titled and discretely concealed - one disk amongst hundreds. And anyway do we want the police - as is supposed to be the procedure in the case of the recent PD raid - to spend the days and weeks going through every disk to see if there are some censorable images among the directories and files?

## x certificate?

Since no certification exists at present for computer software, although it is covered by the Obscene Publications Act, software of an adult theme has hardly bothered to conceal itself. PD porn can certainly be accessed by young people by mail where age is not ascertainable. In addition, most bulletin boards have glamour sections containing very mild images, but with which puritans would be unhappy.

The problem then is that children nowadays have access to adult media and the more audacious to images that might be illegal in our country as customs cannot in any way monitor the

information transfer across countries. There may be, occasionally, as in the recent case of the satellite porn station, Red Hot Dutch, a way in which the Government, out to curry a quick and easy bit of positive public opinion, can stop the broadcasting of material to which it objects because the company has residence in the UK. But in general no such bar exists unless Governments like our own take up the old totalitarian methods of jamming the broadcasts. Interestingly, they don't do that though they continue to raid PD merchants. One law for the those who can afford to pay the satellite subscription and another for...

The problem of quick and cheap international transfer of data, of porn as with anything else, especially over phone lines, as with satellite communication, is one which may have no practical solution.

For example, in France - where according to the song, "They don't care what they do as long as they pronounce it correctly." - Minitel, the French state-owned equivalent of Prestel, has some 30% of the material on the system connected in some way with sex, including offers from young ladies for customers with unusual tastes. Can you imagine the uproar there would be in this country if that appeared here? (And probably the biggest noise would come from those who use the services!)

**In many ways the computer is a medium**

**which allows much more control.**

However, this is an issue quite separate from whether these "pornographic" images should be allowed at all. Because children might see something is not an excuse from denying it to adults who wish to view it. We do live, I

believe, in a free country. I personally loathe nineteenth century novels, but I am not lobbying to have them banned.

Personal preference is wrongly involved in the censorship laws. Moreover, I have little faith in a group of people who set themselves up as legally allowed to view anything so that they can deem it unfit to be viewed by the general populous. How is it, in any case, that the censors apparently can see hours, days, months, even years of this supposedly corrupting material without losing their own morals? Amazing strength of Victorian-style character they must have, don't you agree? (In the Victorian times, though it was on the surface a highly moral society at least for the middle class, there were in fact over 200,000



We can show this...



...but only bits of this...



...and not very much of this!

## do you prefer rock 'n roll?

I saw The Lovers' Guide at the launch where British characteristics abounded. When I arrived nobody was near the computer showing The Lovers' Guide - they were all much more interested in The Rock and Roll Years (Honest, guv').

I headed straight for the Guide. Within two minutes I had a crowd around me who had moved across and yet were watching from a respectable distance, gasping at appropriate moments and pretending (most definitely pretending) to be shocked. In short, everyone was fascinated and why not?

CHILD prostitutes in London alone.)

Censorship in any form has a tendency to undermine all other rights to freedom; it is not only hypocritical but also a denial of the individual's right to make his or her own decision. And that applies to explicit material as much as to the choice of word processor, model of car or daily newspaper. (What is on Page 3 of that government-supporting newspaper

bought by over 3 million people every day? Try banning that - even from children!)





## PORN BROKERS c o n t i n u e d

### respectability

Recently though, adult material has turned respectable. Material which would be deemed obscene if found in a Public Domain library can be released under the title of education.

The point is not whether such images are offensive, my view should already be obvious, but it is how the double standards of British society refuse to die. Whilst one person is being prosecuted, another is earning a fortune, because people do want to watch these things.

### lovers

Supervision have recently launched the CD interactive version of The

Lovers' Guide - reputedly the biggest selling video ever in the UK. Supervision and their parent company, Waddingtons - the very, very respectable purveyors of Monopoly - are more than confident of its huge success. Available on Mac and PC, The Lovers' Guide is awaiting its port over to Amiga CD, - wait for it, wait for it! - due early in 1994.

The program was submitted to the classification board and rated, unsurprisingly, 18. Supervision have taken a great deal of care to stress the educational side. There are quizzes, which seemed totally banal to me, designed to help you know yourself and your partner. (Oh dear, if you don't know her - or him - what are you doing making it then? According to the latest guidance on sex education in schools from the

Education Ministry, facts about sex should not be taught "without a moral dimension"! Tell that to the 12 and 13 year old who are so anxious to lose their virginities.)

More importantly, the program has an introduction which deals with safe sex and has details of sexually transmitted diseases. Not the sort of thing, Supervision's MD says, to titillate. And he's right. To me it seemed a very sensible introduction though isn't that something that should apply to under 18s too? While we're on (or at least near) the subject, why 18? You can do 'it' at 16, but only watch it, learn about it and become informed two years later. Very sensible.

The main program is then password protected to make sure the little ones don't see anything rude. (Oh go on, give us the password, Dad!) In many ways and this is one of them, the computer is a medium which allows much more control. The videos of the same thing have been widely accepted, but there is no way to stop a child accessing the tape. Computers make this blocking of the way possible. Once again it seems that this technology is being singled out because of the fear that freedom might break loose.

The main section (or should I call it 'sex-ion?') is really only parts of the video digitised. The size

big bucks to be made selling sex because we're all interested whether we care to admit it or not. And those people who who buy Amiga CD 32s for their children may not at all be above slipping the "Lovers" disk and others like it that will doubtless be appearing into the machine for a touch of stimulating - or simulating - late night viewing when little Nicholas is in bye-bye land dreaming of Zool or Oscar.

### certifiable

What is the future for the industry then? Technology is continuing to progress to putting FMV on the computer. Since this is the case, can computer software continue to evade certification? Such a move would perhaps free adult computer users to access to whatever material they wanted to see. But it would also bring in the Mary Whitehouse Brigade to start their prudish restrictions. (In the famous Lady Chatterly's Lover trial not so many years ago when they tried to stop the publication of the DH Lawrence book, the prosecuting attorney asked the jury snootily "Is this the sort of book you would let your wife or servants read? Is this the sort of PD disk you would let your wife or servants play with on the Amiga?")

Do we want the police to spend the days and

weeks going through every disk to see if there

are some censorable images among the

directories and files?

(although not important to some) of the picture is very small, a quarter screen at most and the images are sometimes of pretty poor quality. But it is never hard to work out what is happening. The CD version does not contain all of the video, in fact it is around ten minutes shorter than the original.

'Video controls' of the images are available and the voice over explains the goings on - superfluous? No! Educational! The digitised video is split into a dozen or so sections dealing with everything from 'Foreplay' to 'Beyond the Bedroom'.

Whether the content of the footage is 'educational' or not I suppose depends on the individual and since I can't be bothered to indulge any macho talk, I shan't comment. One thing is beyond doubt - if it were not deemed so by the censors, then it would not have been given a licence. Oh, how that restores my faith in them!

As far as everyone was concerned, including people from Commodore, The Lovers' Guide is not a threat to humanity and is going to be big business. There are

However, despite a recent survey showing that the majority of people would like to see material even more explicit than in The Lovers' Guide, we are still, apparently at the whim of a moral (?) minority posing as guardians instated by the moral majority. Unfortunately, since it has taken two centuries even for the Marquis de Sade's and around fifty years for DH Lawrence's books to become available, we may have to wait equally as long for those in power to start minding their own business as to what is viewed in the privacy of homes on the privacy of monitors.

In the meantime why not write to a few MPs and ask them what they think of PD and ask if them if they have any idea of the subversive material (IRA? Colonel Gaddafi?) that is in the Public Domain and on the bulletin boards. And ask them about a Freedom of Information Act so we can find out what is being done and said in our name. You should get some interesting replies. But probably not in language you would want your wife or servants to read. **a**



A very tame picture from The Lover's Guide.



The menu from the Lovers' Guide. Should we adopt a missionary position towards censorship?



**R**emember the olden days, when visiting the newsagents was relatively straightforward? Three or four lightly stocked shelves (Let me see, I think I'll have an FT, the Economist, a copy of Business Weekly and I'll, er, just reach up and get a couple of these... That'll be the lot thanks, my good man. Sorry son, you've got to be over 18 to buy some of this stuff). Half an hour in Smith's on a Saturday and you could read most of the interesting articles - these days in Smith's it can take five minutes just to find the right aisle, as they stock anything up to 2000 publications in a good sized branch. In newsagents, bookshops, libraries and offices, physical floorspace is being stretched by the sheer volume of published information, while at the same time on digital media like CD-ROMs virtual space is going begging.

**That's 2000 gigabytes for anyone like me who hadn't heard of a terabyte before.**

One CD-ROM that costs £1 to press has the capacity to hold up to 250,000 pages of words, or 12000 scanned images. As more people buy computers with CD-ROM drives like the Amiga CD 32, electronic publishing, the distribution of information in a digital form, looks set to expand like a supernova. For the time being, though, it is still just a small but promising sideline of the



You can't play rock and roll off this juke box but it can take 600 megabytes.

## 10 Year Old Baby

**Michael Rumbelow discovers the expanding world of an old technology that is suddenly the latest thing.**

ROMs ('competitive information' as some call it), CD-ROM production services, CD-ROM drives, recorders, jukeboxes and authoring software. Before moving up to the seminar room to try to discover the secret of making your own CD-ROM, I took stock of the latest developments on show.

### valuable

For those who imagine the world of CD-ROM to be a virtual circus of dazzling colours and surround sound, the show was a bit disappointing. They haven't discovered the magic of games and suchlike which are appearing on machine like Commodore's latest baby yet for it seems for by far the

majority of the CD-ROMs on offer consist of lists of businesses, patents and scientific journals, or archives of printed publications from around the world. Valuable no doubt but for most of us rather dull. Doubtless though a sign of things to come. There were several CD-ROM encyclopaedias in different languages incorporating sound, graphics and animation, but full multimedia CD-ROM barely seems to have got off the ground. In six months time it will probably be a different story, especially if the CD 32 makes its anticipated impact. Several

CD-ROM jukeboxes (drives which hold many CDs at once) are now available for people who love big memory - for under £7000 Attica sell a 7-CD jukebox and Westpoint sell a 100-CD jukebox - (that's 60 gigabytes worth and which was mentioned in the NewsFile recently), 28 units of which can be linked together to give 5-second access to almost 2 terabytes of data (that's 2000 gigabytes for anyone like me who hadn't heard of a terabyte before). And I thought my second floppy disk drive was a big improvement.

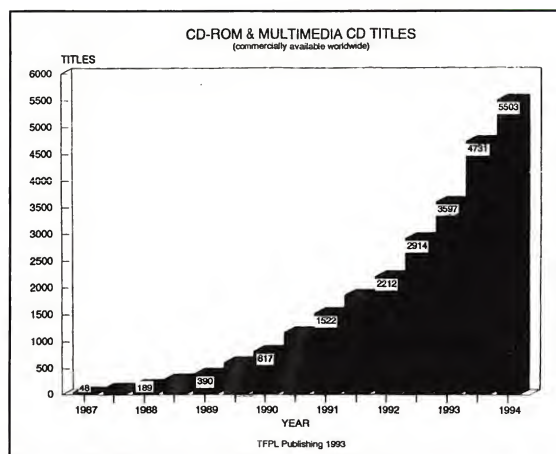
CD-Recording is also becoming more affordable, with the wonderful Clarinet Systems Ltd offering a Kodak PCD 200 writer with their 'Clearview' pre-mastering and mastering software for £5800 - and it supports the Amiga!

### own cd

Meanwhile upstairs at Olympia the exclusive and multilingual seminar programme was going on, and Liz Fletcher from Dataware was explaining to the uninitiated how to produce your own CD-ROM - an option that is becoming more common as the price of the recording technology drops. To produce a CD-ROM commercially using a specialist company takes about a week, and costs about £1000 initially, with further pressing costs of about £1 per disk. To do it yourself takes only a few hours, the technology initially costs about £6000, and each gold 700Mb 'write-once' disk costs about £12. Obviously, for mass-production it makes sense to go to a specialist, but to make those prized, one-off, gleaming gold disks for your family and friends might just be worth the investment especially if you've enough of your generous Granny

money over from the recent festive season. The basic requirements are - one CD-recordable drive, recording software, a suitable computer (e.g. an Amiga), and some blank write-once CDs. The recording software firstly converts the data you want to record into ISO9660, which is the standard data format for CD-ROMs. It then creates a virtual image of the application which can be tested before it finally writes the image to the CD-ROM in the recordable drive.

The physical format used actually to inscribe the CD-ROM itself is known as the 'Yellow book' format, agreed between Philips and Sony, which means that most CD-ROM drives are essentially compatible with all platforms, (the Red book is the standard for audio-CDs, and the Green book is the standard for CD-I). It's worth remembering though that while the drives may be compatible with different platforms, the software on the CD-ROMs they contain may not be, especially where the manipulation of sound and video is involved. For this the recent agreement on a 'White Book' standard for producing video-with-sound CDs was mooted as a breakthrough. And which means, at least in theory, that if Philips abide by their own standard then the FMV movies that come out for CD-I will also be playable on Amiga CD. The 10 year old technology of CD-ROM seems to have suddenly taken pole position in the race for more memory across platforms (including Commodore's CD-32). With only a paltry 3000 CD-ROMs commercially available in the world last year, and only a fraction of those using multimedia, this certainly seems to be just the start. **a**



CDRom growing faster and faster

publishing industry - only an estimated 10% of published information is electronic, and only 0.5% is on CD-ROM - currently being hailed as the main contender for electronic publishing crown. The Online Electronic Publishing Exhibition recently held at Olympia gave a taste of what CD-ROM publishing will be offering. A refreshingly international collection of exhibitors was there (including companies from Russia, Japan and Czechoslovakia), promoting the information available on their CD-



# Interplay

**T**he features that make the CD32 the best games platform you can buy - superb graphics and animation capability, 32 bit processor, CD quality audio, almost 700 megabytes of data storage, and very soon better-than-VHS-quality video - also make it an excellent low cost delivery platform for interactive multimedia applications.

This is something of which Optonica, a multimedia productions and software development company in Leicestershire, of which are well aware. So they have created Interplay, a CDTV/CD32 authoring system designed specifically for non-programmers who want to bring out titles for the consumer market.

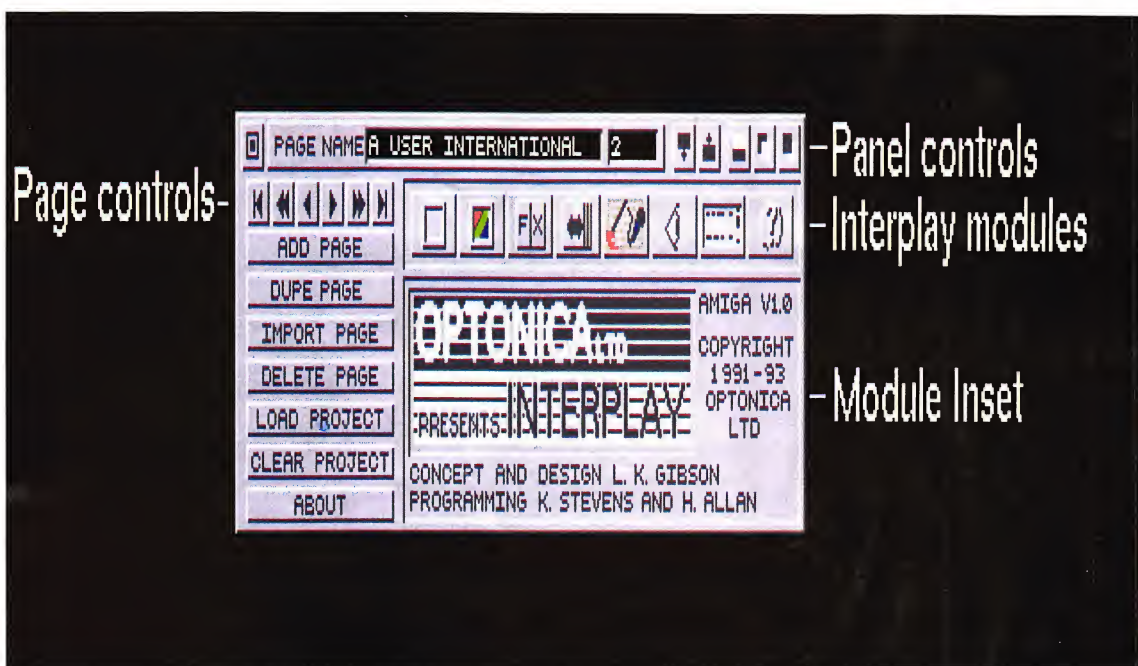
Designed originally as their own in-house tool for compiling CDTV titles including "Pandora's CD", "Insight Technology" and their forthcoming "Insight Dinosaurs", Interplay has now been updated for the CD32 and released as an authoring onto the general market, so now anyone should be able to get into the CD creation business.

The version we have been using is a pre-release Beta undergoing its final tests. However by the time you read this Optonica have assured me that the full version will be ready, and, having used it over the last couple of months for projects which are now fully operative CD32 titles I can assure you that it really does work.

## systems

At £995 Interplay costs considerably more than other authoring systems (with the notable exceptions of InfoChannel), so what makes it so special?

Its appeal lies in the simple interface, powerful utilities, and, most importantly, the unique features it incorporates to bypass the inherent restrictions imposed by the CD32/CDTV environment. While there are many other



Pic. 1: The Main Panel is clearly laid out with access to all of Interplay's functions with only a few mouse clicks. VCR-style buttons let you to move through the pages in your project and a series of icons give access to Interplay's authoring modules. The content of inset panel on the lower right and the buttons underneath the VCR controls change according to the module.

authoring systems available, none is designed for CD32/CDTV and this certainly shows when you try to use them for it.

## environment

The Interplay interface is a neatly designed panel that occupies the bottom third of the screen. It may be lowered, raised or temporarily moved out of the way, and has a special button that removes and places it in a mode that emulates your project in action.

An Interplay project consists of pages, on which buttons, text, images and animations are placed and to which you can assign a combination of various multimedia actions known as "Media Clips." To make navigation a doddle the controller buttons are supported automatically and are emulated during authoring with their keyboard equivalents. The cursor keys are used to highlight a button or item in a scrollable lists selector, the "A" key for selection, and the "B" button

to retrace the user's steps through the application, return to a specified location such as a main menu or index, or to cancel an action. The green button may be configured as a help key.

## effects

You can create as many pages as you wish, and assign any one of sixteen transitions to each one individually. These are used when you move from page to page. A title bar containing the name you give the page is created by default, together with some buttons to move to the first, last or adjacent pages.

**As images are loaded**

**the palette is**

**automatically remapped.**

The colour and size of a page can be changed and border removed, and any IFF image loaded and converted automatically

as a backdrop. Backdrops are restricted to low resolution non-interlaced Extra HalfBrite Mode (64 colours), which rather disappointed me at first. However, there are two important reasons for this. First, it means that applications will run on both CDTV and CD32 (see Box), and, since a backdrop in this format only occupies about 45K of RAM, it maximises the RAM available for AGA images, animations or sound files that are not to be spooled from disc. With some careful design, good looking pages can be produced, as is shown by Optonica's own titles.

## buttons

You add Buttons and text to the page using the boxes panel (Pic. 3). There are eight box styles available and five types. The boxes can be any size up to full screen and can contain an image, text file, or the first frame from an animation. As images are loaded the palette is automatically remapped to provide the optimum for all the images on the page.

There are a couple of special box types, Invisible and List. Invisible boxes are useful when you



have designed a custom backdrop with buttons in DPaint. This image is loaded in as a full screen invisible box, and then further invisible boxes added around the buttons. Invisible buttons are the only ones that can be overlaid on each other.

The List box type allows users to browse through and select an entry from a list of items, and is really very powerful indeed. A list can only be added to a blank page and occupies the full screen.

#### Trying to run a Scala

script on a CD32 is

rather like trying to fit a

7 foot man into a Mini.

Entries in a list can be created in several ways. You can add them individually, from the contents of directory, from a series of pages from your project, or from an index created with Interplay's Indexer. Those created from directories or pages are automatically authored to go to the page or show/play the file in the directory create a glossary. The Indexer(see Box) is a powerful utility that automatically builds a cross-referenced index of all the words in the text files contained within the pages of your application; very handy!

### media clips

These are central to an application, and dictate what happens when a page is entered, a button selected or the help key pressed. It is even

## CDTV/CD32 PAL/NTSC

If you want to author a title that will work on both CDTV or CD32, PAL or NTSC, Interplay can do it. Interplay will determine the system environment, then select automatically the appropriate files which you will have placed in the specific PAL, NTSC, ECS or AGA drawers.

Pic 3. Authoring a Media Clip. This one comprises three events - playing a CD digital audio track, while displaying an AGA picture with a sound effect then transfer to the index page. The picture, image, and page goto are preloaded and launched when the CDDA starts. Options for the highlighted event are displayed in the inset panel with information in the box to the left - here it is CDDA event. The panel and box contents change according to the event type.



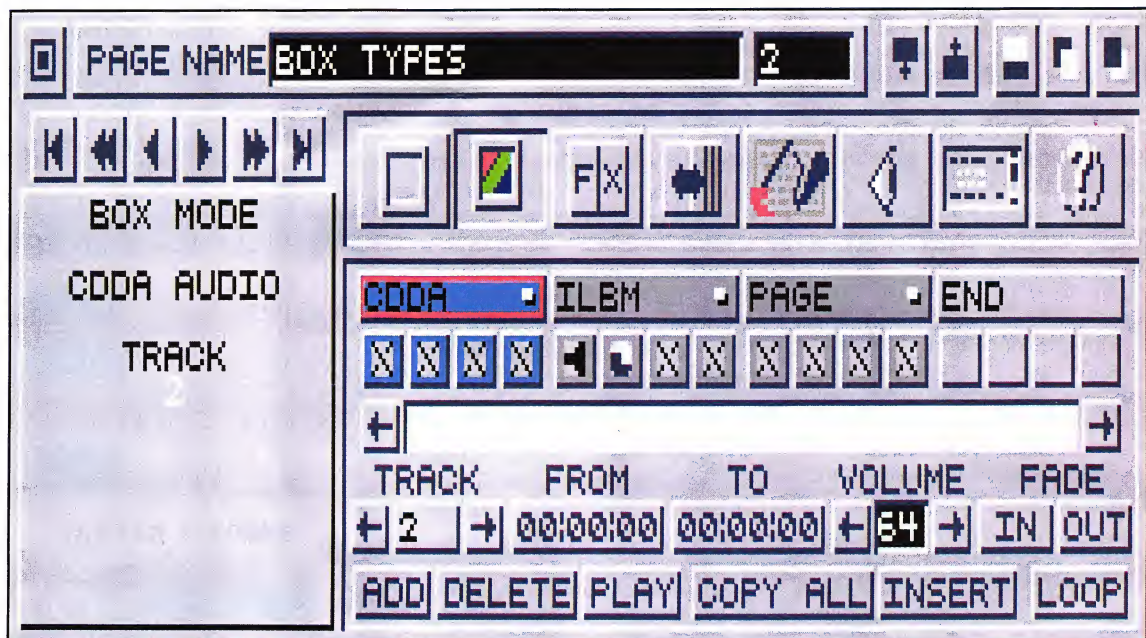
Pic. 2. An example of image and text boxes. One of the box styles has a moving highlight but this is rather difficult to show on the printed page! The default title bar and control buttons are at the top of the screen.

possible to launch a Media Clip when the "customer" has not interacted with your application after a set time. This is known as the "Attractor" mode, mainly because it very useful for kiosk-style Point of Sale/Point of Information systems.

A Media Clip comprised one or more events. An event may be the

## CD Authoring

Compiling applications for these platforms is a very different affair from authoring for conventional hard disk-based Amiga systems. The main problems relate to the fixed memory limit of 2Mb chip RAM (1Mb for CD32), and the rather leisurely pace at which data can be retrieved from the CD. Even with its double speed drive mechanism, the CD32 can only achieve a maximum data transfer rate of about 300K per second, considerably slower than the 1-3Mb per second for an average hard drive. Furthermore, the user normally interacts with the system using a controller, not a mouse, so this must also be taken into account.





# Interplay

C O N T I N U E D

display of an IFF image or animation (any AGA mode including overscan), 8 bit sound sample (mono or stereo), CD digital audio track, digital video file (CDXL or VAXI, Optonica's own version of CDXL), external program or script, or a move to another page.

**It is even possible to**

**launch a Media Clip**

**when the "customer"**

**has not interacted with**

**your application**

**after a set time.**

There is considerable flexibility when constructing a Media Clip. Sound samples can be synchronised with an IFF image or any frame of an animation, the playback rate of an animation can be varied at any point within the animation, a sample or animation may be spooled from disc if too large to load into memory. 8 bit sound can be spooled seamlessly from disc whilst simultaneously loading and displaying any number of static images - very handy for slide shows, and using the CDDA TOC reader specific portions of CDDA tracks can be played.

It's also possible to preload a series of files. This is important because the CD laser can't be in two places at once, so if you wanted to show some pictures with sound effects whilst playing some 16 bit CD audio, you would specify the CD track and preload the images and sound samples. The number of images and samples you can use will depend on their file sizes since the CD32 has only 2 Mb of RAM, but nevertheless this is a very useful feature.

## simulation

The runtime player, the program you include on your final CD to

launch your project, can be run from your hard drive to simulate how your disc will work in practice. When simulating the CD, it's best to run NoFastMem, a Workbench program that allocates all your Fast Ram so your Amiga can only use Chip RAM, giving a better impression of how your title will work in practice.

It is also possible for Interplay to check on the RAM used by your files to make sure they do not exceed a specified limit. Optonica suggest a 1.4 Mb limit for CD32 and 700K for CDTV to make sure there's enough RAM left for the player program and system overheads. This is very useful indeed. Comparison I have now used Interplay for several applications, and I'm happy to say that it admirably fulfills the purpose for which it is intended - to provide a simple to use but flexible tool for non-programmers to build CDTV/CD32 applications.

Other authoring tools don't stand comparison. None currently have direct support for the controller, are able to spool animations or audio to the standard of Interplay, support the double speed CD drive, have the extensive indexing and cross-referencing facilities, or are as easy to use.

## transition

Users of programs like Scala will probably wish there were transitions for page objects, but this just isn't currently feasible in the CD32 environment. Furthermore trying to run a Scala script on a CD32 is rather like trying to fit a 7 foot man into a Mini - a far from satisfactory combination.

The only feature I haven't been able to test is the automatic PAL/NTSC/ECS/AGA detection, but the rest works so I shall have to assume that this does. There are a few bugs, but nothing particularly major, and I have been assured by Optonica that by the time you read this they will have been fixed.

## PICTURE SELECTOR - B

DPLOGO1  
FLAMEGATE  
GOLDFACE  
HAND  
HONEYB  
HOUSE  
KARATEHAND  
MARBLEFACE  
OLDCITY  
OPAL  
SPIRALTUBE  
SUNDIAL  
T8  
TEXTURESPIC2

Pic 4. List boxes. This is a very powerful feature. A Media Clip can be assigned automatically, and then edited. Interplay has created a list by scanning the contents of a picture directory and automatically assigned the picture to the filename as a Media Clip. If the directory contains mixed media, such as sound, image and animation files, the appropriate Media Clips are authored automatically. There is a glossary list function and automatic cross referencing of text files.

## Indexing

The Indexer Utility is a very powerful tool that will be used time and time again. Once you have authored your pages, this cross-references all the text files used on each page and builds an index of the words and the number of times they occur (you can of course set up a filter to remove words such as

"the" and so forth). The index is then loaded in as a list box, and whilst the application is running produces a list of all the words in the project, together with the number of times they occur. When you select a word, the different pages they are on are displayed, and you may then select the appropriate one.

## conclusion

If you do not have extensive programming skills and want to be able to compile CD titles with the minimum of fuss and bother Interplay is just the ticket.

At £995 it is considerably more expensive than the likes

of AmigaVision, CanDo, Helm or Scala MM, but where CD authoring is concerned it leaves them behind at the starting blocks. If you want to see if it is suitable for your needs make an appointment to visit Optonica. They'll be happy to show you all its marvels and I don't think you'll be disappointed.

### Ratings: Out of 10

FEATURES	<div><div></div></div>
EASE OF USE	<div><div></div></div>
DOCUMENTATION N/A (BETA)	
VALUE FOR MONEY	<div><div></div></div>

### OVERALL RATING



## INFO

Price: £995.00  
Contact: Optonica Ltd  
1 The Terrace,  
High Street,  
Lutterworth,  
Leicestershire LE17 4BA  
Tel: 04555 558282

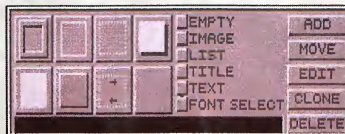


# INTERPLAY

## THE ULTIMATE CDTV-CD32 AUTHORIZING SYSTEM FOR THE AMIGA

JOIN THE AGE OF MULTIMEDIA - From the authors of the best in Commodore CD multimedia productions comes Interplay, a system which puts sophisticated multimedia production in the hands of the creators and producers, not programmers. Interplay has been designed with ease of use in mind, reducing the time and cost of title production to the minimum. Quick prototyping and WYSIWYG point and click operation make Interplay the ideal tool for commercial producers of CDTV and CD32 titles, of any size. Interplay has been in use, at Optonica, for nearly two years, undergoing refinement over this period and now incorporating CD32 (AGA) support it is ready for release. The commercial possibilities for Interplay are demonstrated by the fact that it was used to produce PANDORA'S CD, INSIGHT:TECHNOLOGY and INSIGHT:DINOSAURS, titles acknowledged as being among the best available for CDTV and CD32. Interplay is totally optimised for CD production, save £1000's on production costs on a single project.

### PROFESSIONAL CD32 and CDTV TITLE DEVELOPMENT SYSTEM

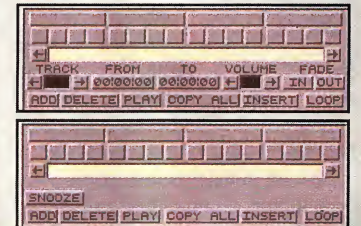
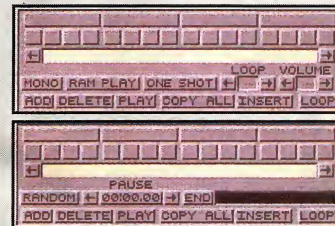


### PROFESSIONAL CD32 and CDTV TITLE DEVELOPMENT SYSTEM

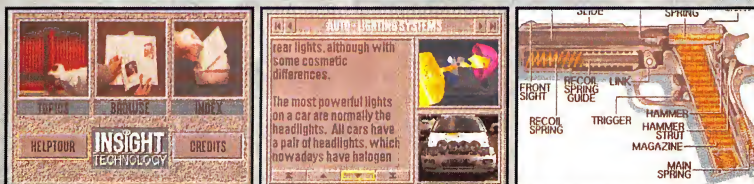


### FEATURES INCLUDE

'Point & Click', no programming knowledge required - Supports all Amiga graphics modes in PAL, NTSC, ECS & AGA, Amiga animations (ram loaded or disc spooled) - CCDA audio - 8SVX IFF sound samples (ram loaded or disc spooled) - SMUS and Soundtracker music files - ASCII text files - VAXL motion video - External program launches - Auto PAL/NTSC & ECS/AGA file seek and display for international titles - Text cross reference system - Multi team project imports - Use built in box/button styles or design your own - Sophisticated user selected list authoring - Built in page to page transitions - On line help system - Dynamic colour page remapping - Spool images AND 8 bit audio from CD simultaneously - Works with CDTV and CD32 controllers - Fully multitasking - runs under OS1.3, 2.0 & 3.0 - Supplied with runtime player, no hidden costs.



## INSIGHT:TECHNOLOGY



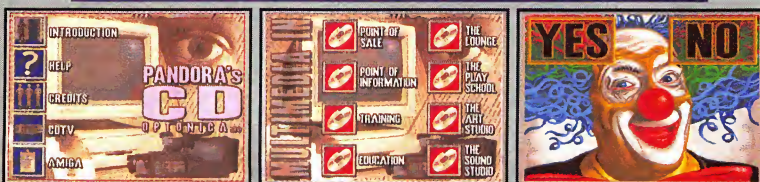
INSIGHT:TECHNOLOGY, lavishly produced by Optonica and published by Commodore gives a fascinating look at modern day technology with pictures, animations, photos, video, narration, text, music and sound effects, over 260 topics in all, every one with a wealth of multimedia material, bringing each subject to life as never before. Subject range from the ball point pen to the space shuttle.

## INSIGHT:DINOSAURS



INSIGHT:DINOSAURS is the second title in the INSIGHT series, a lavishly produced title rich in multimedia. You can be assured INSIGHT:Dinosaurs will be visually stunning and technically correct as the title is being produced in association with the British Natural History Museum, one of the worlds foremost centres of excellence in the field of paleontology. Also includes quizzes, puzzles and dinosaur paintbox.

## PANDORA'S CD



PANDORA'S CD shows you just what can be achieved with multimedia and your Commodore CD system, an all original promotional disc containing something for everyone, Five Senses production, the Nuclear industry, number counting game, Milton Keynes guidebook, jukebox, clipart library, photo library, textures library, sound effects library and a sampler of INSIGHT:Technology. Sample the wonderful world of Optonica multimedia.

INTERPLAY AVAILABLE OCTOBER 93 AT £995.00  
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# test drive Scala MM300

**Down comes the price and up go the specs of the heavyweight of the multimedia world. Gary Fenton test drives a very cool program.**

Over the years Scala has evolved, originally from an up-market teletext system to a home titling package, and, in 1992, mutated into a professional multimedia package. The new 1994 model, which I've been test driving, offers some very persuading audio-visual treats for this growing, power hungry market.

Scala has made many friends all over the globe in all kinds of markets. If you're one of the few people who don't quite know what Scala is then read the "What Is Scala?" box. I'll assume you know a bit about Scala, so buckle up and get ready for a run down of the new MM300 features.

## wipe out!

Now with well over different 100 Scala wipes to choose from, you'll find yourself spending hours deciding which ones to use! Luckily, Scala have included 2 random wipes which make your mind up for you!

There are just over a dozen brand new wipes, some will knock you out with excitement (well, almost) while some are just average. My favourite is "Wallpaper" which, as the name suggests, peels the current page off the screen (like wallpaper) to reveal the screen underneath. There's also "Rollodex" which flips over the

current screen from the center, a bit like a calendar, and "Flipover" which is similar except it flips the whole screen.

Another new one, "Chest", opens the screen from the centre, like a cupboard with two doors, and the reverse wipe closes the doors with a new screen. These apparent 3D wipes are very imaginative but it's easy to overuse them!

"Dissolve" is a new one for Scala which I've seen previously on PCs (pah!). It's an alternative to "Superimpose" which brings in/out your screen pixel by pixel. It's most effective for bringing in/out graphics which are genlocked over live video.

"Nuclear" suddenly changes the screen go white and then fades to the next screen. "Ccccut" cuts to the next screen and then back to the previous one, and repeats about 10 times, picking up speed to a mad flickering pace before calming down, finally resting on the new screen. Not funny for epileptics.

Nearly all of the wipes now work as line wipes too, so you can apply "Wallpaper" or "Cube" wipes to any individual text or graphic on the screen. The Wipe interface is also more intuitive, so a simple double-click on a wipe effect will give you an instant preview.

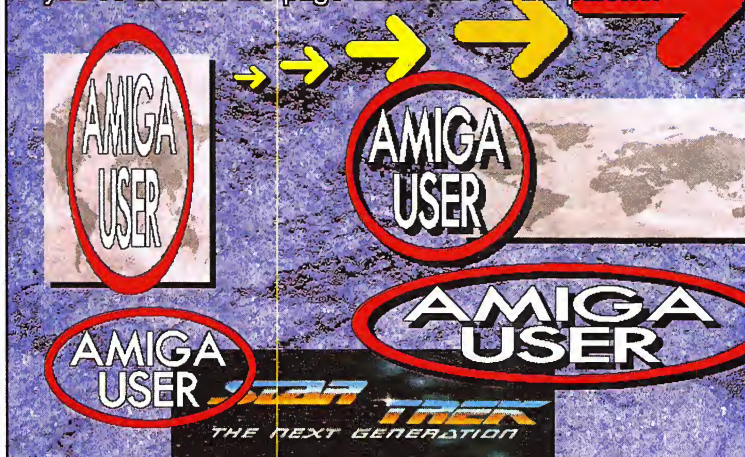
One new line wipe is "ByCrawl" which, like "Crawl" on MM200, scrolls text horizontally along the

This is a hires-face 256 colour screen. Below is the Scala MM300 interface, slightly different to MM200.

The drawing tools are on the right and wipe in/out effects are detailed on the left.



All the brushes on this screen have been resized from within Scala MM300. Don't worry about crude colours brought on by palette clashes. Hitting Optimise after you've created the page takes care of the palette.



## What Is Scala?

Scala is a Norwegian company which has grown considerably in the last couple of years. There are dozens of Scala outposts throughout the world including a very successful UK division in Hertfordshire. Scala's premier product, InfoChannel (IC), is used in hundreds of public places such as banks, shopping centers, stations, cable TV, and airports around the world. IC displays information, like teletext, but uses high resolution fonts, pictures, animation, and fancy wipe effects.

The Scala MM packages are the same as IC but are stripped of the communications and scheduling features. As a result, the Scala MM series is a lot cheaper than IC which brings it within the reach of the average consumer. The MM series (200 and 300) offer various uses such as video titling, multimedia authoring, and AV presentations.

Normally such power would be difficult to control, but Scala have devised a very attractive "human touch" interface. Described as "child-like", the interface uses very clearly marked buttons with absolutely no technology blinding controls in sight!

Creating titles and presentations in Scala is a pushover. It's a simple matter of going "click, click, click" with the mouse, and anything you've done which you don't like can be changed just as easily as you first created it.

No programming whatsoever is involved. Everything you do is recorded automatically as a script. These scripts can be saved to disk and, for the expert, edited by hand in any text editor. However, this is completely unnecessary for 99% of Scala users, but the option's there for fine tuning your scripts.





Three 24 bit brushes have been loaded onto a 256 colour screen and rendered using the background's palette and Floyd-Steinberg dithering. Not bad really.....

resulting collage can look a little disappointing.

The "24 bit" screen can be rectified by going into the resolution menu which gives you plenty of options for ADPro type processing. You can change the screen size, type, number of colours, and optionally select Floyd-Steinberg dithering and palette optimisation. Click on "OK" and after a bit of processing - hey presto! 90% of the time the resulting image is incredibly good looking, considering it's only using 256 colours. Brushes can also be remapped with dithering which looks very tasty in high res lace.

An Optimise button in the palette menu will generate a brand new palette based on the colours of the images and text on your current screen. Because of this dead handy feature you no longer have to worry about keeping to the same palette.

Brush handling is also exceptionally good with features such as resizing and cropping. Hotkeys can be used for quickly for halving and doubling brush sizes too.

## fontastic

Text is easier than ever to edit thanks to the intuitive "Move" feature. Picking up text or images is done by clicking on the image and dragging it around the screen to a new position.

MM300 has four levels of anti-aliasing, the fourth being the best but still not (arguably) quite up to Broadcast Titler 2's high standard. Some fonts tend to anti-alias better than others so it's a case of trying them all out to see which looks the best.

Underline colour is individually controllable, so you can easily have green text underlined in pink, although I don't know why anyone would want to choose those colours!

# System Requirements

MM300 needs 3 Mb of RAM to run and at least 5 Mb to get the most out of it. Of this, 1 Mb should be chip RAM, or 2Mb if you want to use some of the 3D wipes. You must have Workbench 2 or 3, so hard luck 1.3 owners! A hard disk is another must.

## sounds good

Sound handling was terrific on MM200 and now includes the advantages of spooling long samples off the hard disk with minimal use of memory.

You can do things such as play a SoundTracker music module at half volume and then fade in a 10 Mb sampled voice over, which is spooled from the hard disk when the sound buffer nears empty.

Sound samples can automatically be played when you "mark" an interactive button and another sample can be played when you actually select a button during your script. It's a global function so you don't have to set it all up for every button you create.

## drawing

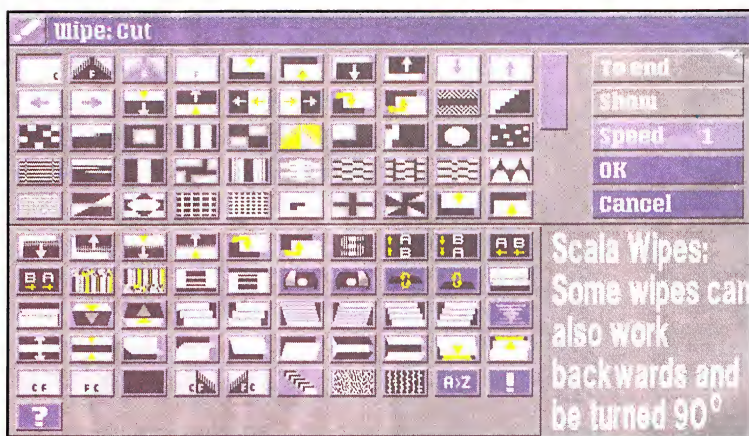
Three drawing tools have appeared in MM300; box, ellipse, and line. These are most needed for creating graphs and diagrams from within Scala and save the hassle of going into your paint program every time you need a different shape.

Boxes can be "bevelled" which makes them look like a 3D button.

*c o n t i n u e d*



Selecting Optimise from the palette menu generates a brand new palette. The images now have more contrast and colour fidelity.



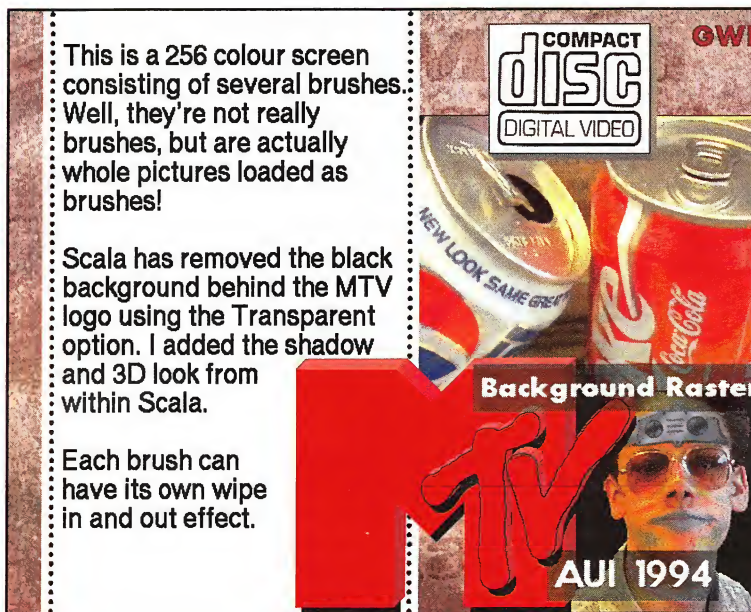
screen except it doesn't take the background with it. Scrolling messages move effortlessly across and over a background without decimating it at long last!

Seasoned Scala users will jump for joy when they find out that there's a Wipe Out button on the page editor's interface. This means text and graphics can wipe/move off the screen after they've come on, or at any point while the current screen is being displayed. Even with a small amount of imagination you can create some very flashy sequences with text flying in and out!

## 24 bit brushes!

MM300 will happily take in 24 bit brushes, or screens, without too much fuss. This is great news if you create your graphics in a 24 bit paint package as Scala will also handle palette remapping and dithering.

To give you an idea of what can be done, imagine loading a 24 bit image and then adding in a couple of 24 bit brushes. Because Scala can only display 256 colours on an AGA screen and not 16 million (due to hardware limitations) the



Caption



## Scala MM300

c o n t i n u e d →

Scala automatically chooses the best colours for bevelling but the user has full control over the colours of the four sides of the box.

turns Scala into an automated vision mixer!

### video

Video enthusiasts will be pleased to learn of two features which are particularly helpful in video production. A new "Background" mode creates a solid background behind any specified text. The background's colour is controlled individually from the text colour, so you could have red text on a blue background.

Going into the layout menu you can choose a "raster" for the background. These are patterns which affect the transparency and clarity of the background. Setting 1 is good to obtain a 50/50 transparency and best comes into play when you've got live video genlocked behind the text. "Background" is a must for subtitling and most other captioning work.

G-LOCK! G-LOCK! That is an attempt to get G-Lock users attention because I've got some good news for them. A special EX module is included in MM300 which gives total control over GVP's genlock from within Scala.

**You can load in files**

**from an animation**

**sequence... convert**

**them, and save it all**

**out as a complete**

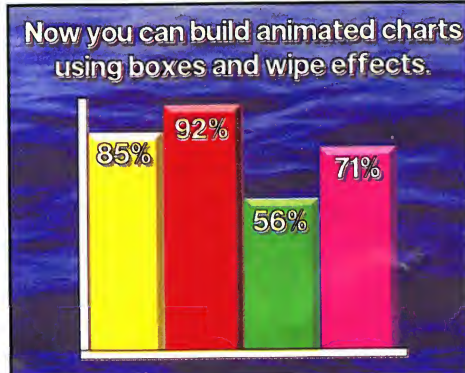
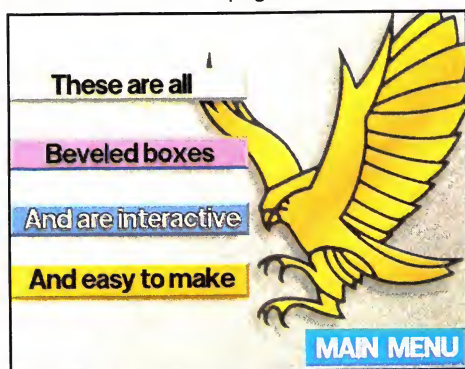
**animation file or as**

**separate frames.**

The four video modes (External, Amiga, Overlay, and Inverse) can be faded in and out using either one of the composite or YC inputs. Likewise, either one, or both, of the audio channels can be faded in and out too. Using these facilities from within your Scala script literally

### pictures

Scala uses a list of page names in the main menu to show the running order of the pages. MM200



introduced the "Shuffler" which represents the pages as visual thumbnails as an alternative to text.

MM300 does the same but extends the idea to the file requester. Each image in the current directory is examined and a thumbnail is created, and optionally attached to its ".info" file for future use. What you get is a visual list of your images, a picture picker, displayed in shades of grey, in any one of 6 selectable sizes.

### utilities

There's nothing much that's new on the utilities front apart from the reworked AnimLab program. From here, you can load in files from an animation sequence, or indeed a complete animation file, convert them,

and save it all out as a complete animation file or as separate frames.

AnimLab supports IFF ILBM files and all screen modes except (strangely) 24 bit files and Anim7. However, it does have some clever tricks up its sleeve to produce faster playback of animations. "Turbo-nutter" formats include Anim8 Word and Long, Anim16 and Anim32 with an optional feature which strips every odd line from interlaced animations resulting in even greater playback speeds.

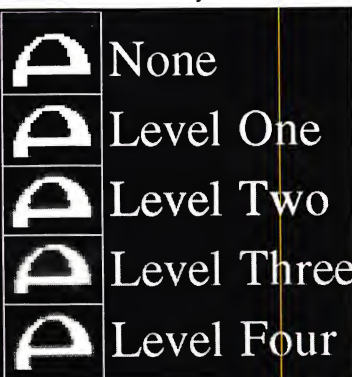
The other utilities are FixScript (sorts out problems with file names and directories after you've moved your script onto a different

computer), and ScalaPrint (prints out a list of what's happening in your script or a visual storyboard using your current printer setup).

### conclusion

MM300 is a superb package which satisfies many different needs. It's hard to say what it can

**The Four Levels of Anti-Aliasing**



actually do for you since you're the only person who knows what you want. But I hope you've picked up some ideas on what uses you can put Scala to from reading this review.

Take it as a presentation tool, a sexy electronic notice board, a bells and whistles titling package, or an interactive multimedia authoring package, it's humungously good. Nay, a masterpiece.

Recently Scala have made an interesting change in their pricing

## Not All Roses

Scala may be king of the multimedia world but it does have its faults, or "lack of what I want" to be more precise!

It still doesn't support animbrushes which would add even more room for creativity. I'd like to see animations which run even when you have interactive buttons on the screen. At the moment the buttons stop the animation from running.

Moving more than a handful of pages from one end of the script to the other is a total pain as pages can only be moved individually, not grouped.

Text... you can't have different colour text or fonts on the same line without joining two lines together. And some page wipes look a mess when the palettes of the two screens mix. I'd like to see the old screen fade to black to avoid this problem. Finally, there's still no teletype wipe - the most basic of all text wipe effects! Otherwise, everything else is cool!

policy. MM200 has nose dived from a hefty £400 to a more elegant £149 which brings it within reach to a lot of previously disappointed people.

Current MM200 owners can upgrade to MM300 for around £200. It's a lot of money for an upgrade but I reckon the new additional features warrant the price considering the further year MM300's had in development. If you don't think it's worth the extra investment then you're probably not going to benefit from the extra features that MM300 provides, anyway.

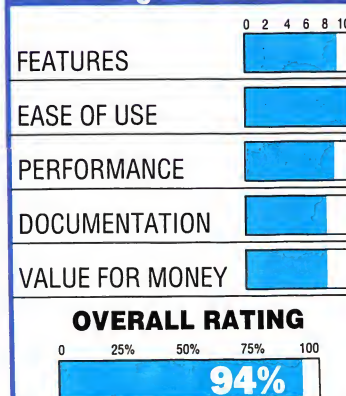
For the professional who is always in search of new ways to harness the power of the Amiga, then I can say (with hand on heart) that MM300 is the best collective multimedia package on the Amiga, and probably on any other platform too.

The magic that so many users found in MM200 has been passed on to MM300, which will continue as the standard by which all other multimedia packages are judged. **a**

### Info

Price: £329.00  
Contact: Scala UK Ltd  
Mill Studio  
Crane Mead, Ware  
Hertfordshire, SG12 9PY  
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### Ratings: Out of 10





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**W**hat's turned from black to white, grown bigger and faster, yet remained the same size? The answer is the new Vidi-Amiga real time frame grabber which has arrived in 24 and 12 bit models. Working on all Amigas from the A500, it will ideally be used on 1200s and 4000s as it supports all the enhanced screen modes.

## features

Capturing 16.7 million colours in any AGA mode, it can display images up to 1472 x 576 pixels. ILBM, ANIM, BMP, PCX and TIFF files are supported. The image processing software has been made yet faster and more variations added. Effects now implemented include: average, colour balance, blur, convolve, edge detect, emboss, flip-x, flip-y, maximum, minimum, negative, pixelize, quantize and threshold. Exposure, gamma, contrast, brightness and saturation can all be infinitely varied as well, to improve the picture.

Cut and paste is available as usual and it's very easy to move among pictures in the carousel to take bits from one picture and add them to another. There is an Undo function for the last effect you used.

This new model is exactly the same size as before and still slots into the parallel port of the Amiga. A new twist, however, is that it doesn't use power from the Amiga as in the past; instead it has a power socket in the back. A power unit is not provided - probably as many people have their own, but I did find that two 'cheapo Far Eastern' units, purporting to supply the required 9V DC 500mA supply, failed to allow the program to run or caused it to crash. Recourse to a 'Class1 Adaptor' - made in Britain and which may be ordered from Rombo as an extra, resulted in completely trouble-free operation.

The Vidi-Amiga has become by far the highest selling Amiga digitizer of all

time. So I won't go on about aspects we've covered in depth in AUI previously, but concentrate on new features.

There are now three video inputs on the back of the Vidi; two composite signal phono sockets and one Y/C 'super' video socket. At this point I must ask if there's anybody out there who has seen an S-video lead longer than two or three feet? I haven't and it's extremely inconvenient at times, trying to link camera to computer.

## operation

Preferences for grabbing and display are very much as before, though now providing 256 shades on screen when using AGA machines. A very useful addition is the ability to have the picture being grabbed only occupy a quarter of the screen; this speeds up things considerably and you see the whole picture without needing to close the control panel. Because 24 bit images are now being grabbed, the grabbing process is noticeably slower than before, particularly with unaccelerated machines. No problem with A1200s.

Contrast, brightness and colour of the incoming signal can be varied with sliders, as before, but now any vertical alignment is done via the cursor keys. Very sensible.

Grabbed images are stored in a buffer as RGB triples. When saving to disk, they will be saved as in the 'save

## Alan Puzey test drove Rombo's new real-time frame grabber which not only grabbed his pictures but also his heart.

prefs' unless you go to the 'Mix Control Panel' where different screen modes and resolutions may be chosen. Error Diffusion may be applied at this stage to improve pictures changed to 16 colour hi-res. With the proliferation of screen modes, users with older Amigas may get frequent screen messages to the effect - "Image Display Mode is not available on this Amiga".

However, even though you cannot

usually correct it within the Edit Controller. All the exposure and brightness type controls work really well for image correction, while for those who consider their image is so good it has to be degraded, there are many effects to choose from.

The effects are more noticeable with lower resolutions and pictures of only 16 or 32 colours. The most useful for me were convolve, pixelize, emboss, edge and cut/paste, though these are always a matter of personal taste.

One thing you will notice very quickly is your rapidly diminishing memory banks as you save 24 bit images. Another major addition to the software is the the 'GetRGB' function. This enables you to load any picture file and convert it to an RGB format, thus enabling you to use the editing facilities on pictures not created within Vidi-Amiga. Very useful,

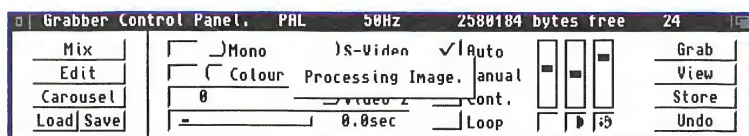
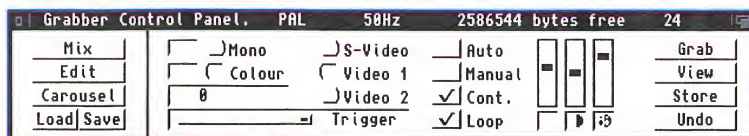
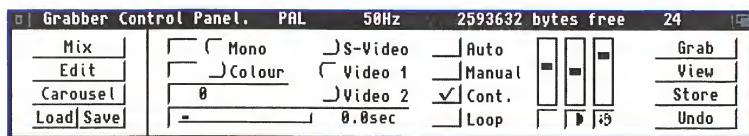
as these facilities are now very comprehensive and fast in operation - worth having as an image processing program in its own right, in my opinion.

## timelapse

A feature that I really like is the timelapse framegrabbing. An exciting facility it can turn you into a Fellini - if you're the arty type, or your Amiga into a security system - if you're a techie.

This form of grabbing allows frames to be grabbed at intervals from half a second to six hours, no less. The budding Fellini amongst you can start picturing those lovely time-effects of flowers opening or clouds scudding across the skies, or even something more original and imaginative.

You might, on the other hand, start designing all sorts of computer-controlled surveillance equipment. With the timelapse delay set appropriately, the Amiga and a video camera could



Vidi RT Control panels - excellent for Image correction.

view it at this stage, you are still able to save the picture to disk for use at a later date, when you have possibly upgraded. Saving individual pictures and animations are as straightforward as before and my only gripe is the lack of a fully automated save routine, that I have repeatedly recommended should be added to the program!

The Carousel operates much as before, providing twelve images on screen at a time, to be viewed and to allow selection for saving or editing. Simple animations may also be performed at this stage.

## results

Digitized results were excellent, though working with an early Amiga is laboured and disappointing as you cannot view the best results. The Vidi-Amiga really performs with an A1200 or A4000.

Even if a picture is slightly off-colour, there's no need to regrab it as you can



You can load any picture file and convert it to RGB



# AMIGA RT

happily record the comings and goings of everybody at a particular location. It doesn't end there: the highest delay setting is called 'Trigger' and this allows the joystick to be used as a triggering device. By replacing the joystick with a suitably wired plug and lead, you could make a device which would take a picture each time a pressure sensitive switch is activated. A nice innovation!

## models

The Vidi-Amiga has always enabled continuous picture grabbing, until all available memory is used; well, now there is a 'loop' facility that enables

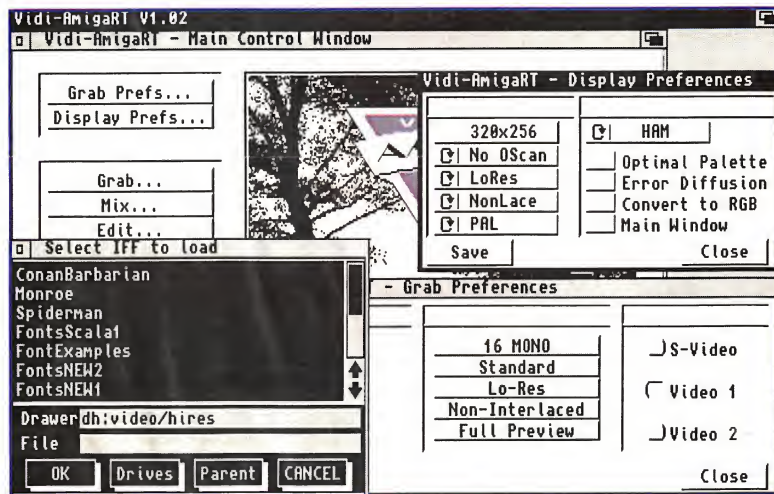
you to continue grabbing after the memory becomes full by overwriting the images already grabbed.

The 12 bit machine is priced at £199 and the 24 bit at £299 but you may find them discounted at exhibitions and from dealers. The fundamental difference between the two is that the 24 bit model is grabbing 640 or 720 pixels per line in hi-res and the 12 bit grabs 320 or 360 pixels in lo-res.

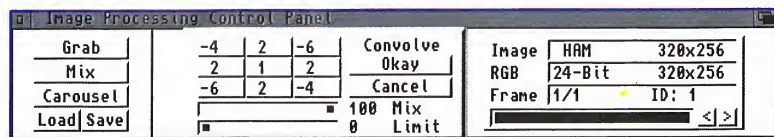
Rombo have implemented the perfect procedure - previously operated by just a few other equipment producers - of offering to upgrade any of the Vidi-Amiga models in their range for exactly the difference in the original cost price. An excellent move.



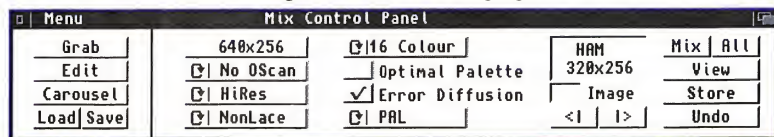
Capturing 16.7 million colours in any mode.



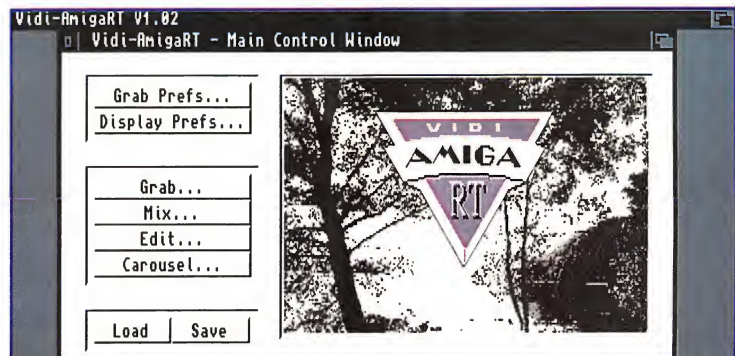
Time lapse frame grabbing is now possible.



Below: Contrast, colour and brightness of the incoming signal can be varied with sliders



Below: "No sir, we are not giving you more than 98%"



New features, more variations, faster...

The Vidi-Amiga, with or without sound sampler, will continue in production for the present and is an ideal alternative for those not requiring 24 or 12 bit images and there are plenty of those people about.

## conclusion

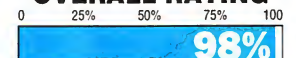
Between £200 and £300 for an excellent 24 bit real time frame grabber that you can slip in your pocket and take anywhere...

Vidi-Amiga RT has outstanding features and works flawlessly. This is a superb product. We are not going to give it more than the 98% we gave the Vidi-Amiga 12; where would Rombo's incentive be to produce yet a better machine go then? And they could tidy up the save routine just a tad... Nevertheless terrific quality and value for money. **a**

## Ratings: Out of 10

	0	2	4	6	8	10
FEATURES						
EASE OF USE						
SPEED						
PERFORMANCE						
DOCUMENTATION						
VALUE FOR MONEY						

## OVERALL RATING



## INFO

Price: £199.00 / £299.00  
 Contact: Rombo,  
 Kirkton Campus, Livingston,  
 Scotland EH54 7AZ  
 Tel: 0506 414631



## WARNING

Due to the exchange rate, or manufacturer's changes or due to current RAM shortage, some prices may alter, either up or down, during the several weeks between going to press and the end of the month of issue. We would ask that prices be confirmed by telephone before ordering.

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\*DP111 needs 2MB for animation on HD models

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I found a small package on my doormat. It was from Impulse, Inc. Was I excited, or what?! Yeay! Imagine 3.0 at last! Hey! Wait a minute, how did they fit the wonderful new manual in this tiny little package?

Well, the answer is, they didn't. What they did do though, was to send out a little taster of Imagine 3.0. It is actually Imagine 2.0 with some new bits roughly bolted on, tied on with string and held in place with Sellotape. This isn't to say that I'm not happy or impressed in any way. It's just to make it really clear that this is NOT Imagine 3.0. Not at all. It's Impulse's way of saying sorry we're so goddam late and thanks for the upgrade money. They've got to live on something. Therefore, we ain't going to 'review' it and rate, as that wouldn't be fair.

So the questions are; what exactly have they given us that's new and are all the bugs fixed?

Let's just get the bugs out of the way first, with a really simple answer. No. Not only are ALL of the old bugs still there but there are now some interesting new ones to play around with. Oh joy. Don't worry though, Impulse say they are fully aware of these bugs and they will not be in the final release of 3.0. (Oh really?) This IS just a taster of what is to come. It is not intended as an official product upgrade in any way. (Oh really again?)

The other thing to mention about bugs is that Impulse have apparently changed their attitude towards the users of their software. They now like us and welcome our opinions, phone calls, faxes, suggestions,... Thank god for that. I really cannot see anything more stupid than ignoring the users of the software

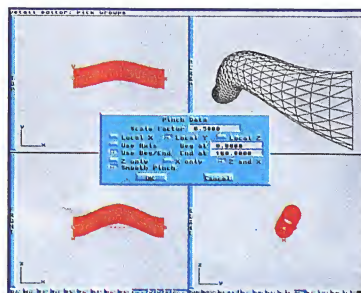
for whom the company is designing and developing. Isn't the ideal product, exactly what the user wants? It would sell in thousands. I don't mean this as a moan at Impulse it's more of a general observation of companies and their attitude to customers and users, which in my recent experience is either indifferent or down right rude.

## what's new?

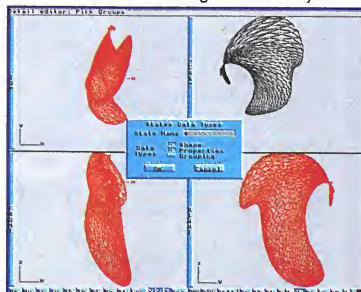
The first thing I wanted to see, was whether there were any changes to the basic interface. There are a few but they are pretty fundamental. The main difference is the new Real-Time/Interactive window. Gone are the little black handles, replaced by a slick real-time, mouse controlled window. This has three buttons to toggle between pan and rotate, zoom and perspective adjustment. In practice this operates a little like the interface of Caligari. It's not quite perfect but very close!

There is also a handy Reset menu to return to the default setting. Well this would have been great on its own but it doesn't stop there. There is now a new preview mode besides wire, solid and shaded, called NewMode. Unassuming in name but it's a beauty! When NewMode is toggled, your 3D preview window shows all the axes,

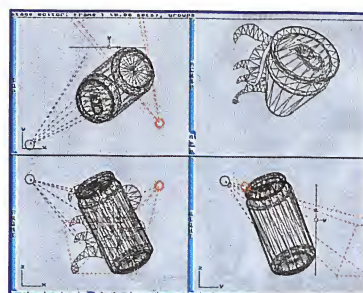
## Barry McCarthy discovering a package on his doorstep, previews an Imagine 'Under Construction'.



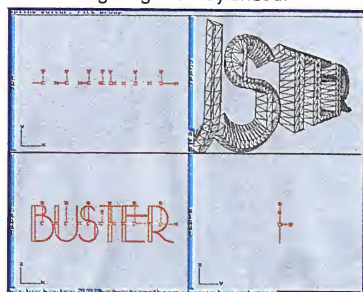
The detail editor dealing with a bendy tube



The Spline editor.



Lighting the way ahead.

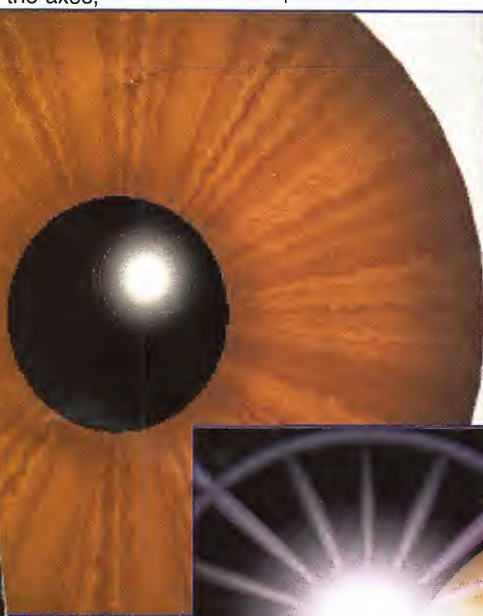


Under construction.

points, edges... all of which can be edited, just as in any other window. Now you can edit in 2D AND 3D.

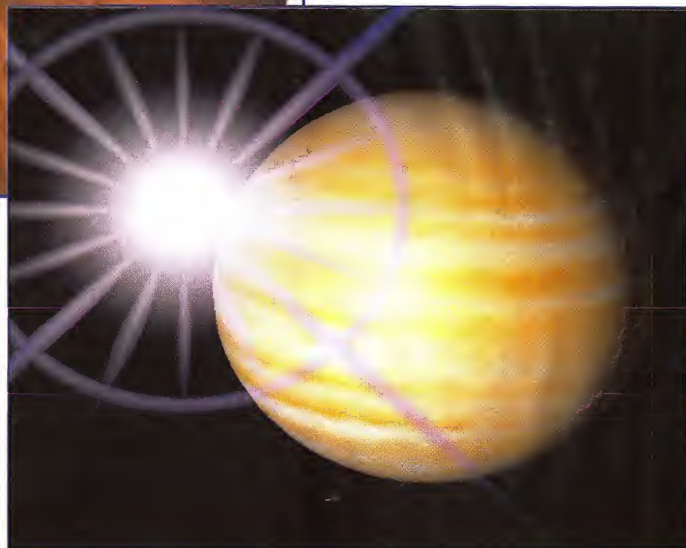
The other big additions to the interface, are the Deformation buttons. At last you can stretch, twist, taper, pinch, bend or shear, all interactively on screen or precisely using data boxes. There is also a smoothing button, to smooth out your deformation or keep it more angular.

Unfortunately this doesn't leave a lot of room for the custom user gadgets. A second line of them would be a good idea, perhaps at the top,



The eyes have it.

Lens flare and a gas giant.



A dinosaur's tail?



# Imagine...

under the menus.

We're talking about the detail editor here, so let's just see what other new modelling functions there are.

Quick Edges are selected just like any normal edges but mean that when you look at the preview window, only the selected Quick Edges show up. As an example, the letter B would just be an outline with no internal edges slowing down the display. It doesn't sound that great until you use it a few times.

Along with this is an Edge Filter. This lets you select edges using certain restraints based upon angle and/or faces. With the B example, the default filter selects every outside edge and no face edges. Brilliant for using Sharp edges on logos. Again it's a small addition that makes a lot of difference in day to day use.

Latticeize. This creates a lattice of holes in any selected object or set of faces. Good for inner workings of buildings etc... Not an every day tool though.

Imagine can now load and save DXF format but not very well yet. Try Accutrans 3D, it's close to perfect!

## states

Now for something MAJOR (unlike our glorious leader).

States is a VERY groovy new feature that will be a fundamental part of the final release. Essentially, it is the ability of an object to retain several 'states' within itself. It's like an object memory. Start with a sphere connected to a pole. Wrap a picture on it, add a texture and make it all shiny. Call this state "sphere" in the new STATES box. Nothing amazing has happened yet.

Bend the sphere and pole like it's melted and make the surface matt. Call this state "melt".

You can now choose to see your sphere in any of these two 'states'. When you save the object, it will remember all of its states, including Shape, Properties and Grouping. Try rendering the melted state. WOW! The brushes and textures have exactly followed the melted surface, without any help from you. This is called 'Brush or Texture Tacking' and it's FAB!

What's more, in the stage editor, your object can now morph between any of its states. This will eventually make the cycle editor redundant in release 3.0 (but it will stay for compatibility with old objects).

## new stuff

Well, we're in the stage now so let's have a quick look around the new stuff here.

Objects can now exist in different layers which can all be turned on or off.

The camera and lights can have lines representing their areas of effect, which makes visualisation a whole lot easier, especially when combined with the interactive preview window. Most of the time, you can set up your camera angle, position and zoom in real-time, using the mouse. Oh joy of joys, that



through strange...

sure saves a heck of a lot of time.

Not much else has changed here except for the addition of a new Special Effect. Particle. This is a huge FX that you can use, to simulate wind, gravity, snow, rain... Sort of. Yeah, don't get too excited, it's complex to use and tricky to get anything useful happening. I hope the new manual will help here (and everywhere else for that matter).

Got an A1200 or an A4000? Good, because now you can render and



A Coke can from normal...

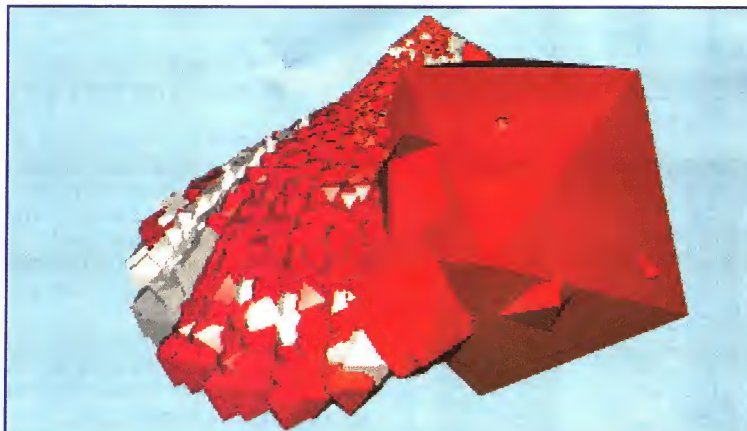
stuff will be in 3.0. Damn. Aliasing anyone?

Oh yes, I almost forgot, there's a new editor. What? You forgot a whole editor? Sorry but it's not really very complete yet. OK, I'll give you a quick run down.

The Spline Editor lets you load PostScript Type 1 fonts (binary only) and automatically builds 3D objects from them, complete with a choice of bevelling, extrusion and back face removal. Great but why not use Compugraphic fonts as well? That's what all the Amiga community have,



to bizarre.



What a state!!

preview in HAM8 (or even OpalVision). That's the only difference in the rendering section. All the new

isn't it?

Even when you do find the right type of font, it rarely manages to

convert successfully.

The other thing that's missing here, is the ability to import and trace bitmaps.

The spline editor is a superb idea make no mistake but it really needs a bit more work before it's useful.

Finally, I must mention the new textures. The eventual number will be about 100 but for now we can play with 66 of them. Are they good? Are they fast? As good as Essence? Yes, yes and yes. Surprised? Me too. Some of the new textures are simply stunning, here's a taster;

Crumpled, Dinoskin, Leather, Monster, Pebbled, Metals, Worm Vein, DeathStar, FireBall, Gas Giant, Iris, LensFlare...

Sound good, don't they? Well, they are. Oh yes, before you try any Essence textures in Imagine 2.9, be aware that the texture file format has now changed. Any old format textures will NOT work at all. I wonder if the delay of Essence II is due to this?

Well, that about wraps it up for now. Imagine 2.9 is NOT the next Imagine. We wait for version 3.0 but it is a nice taster of what is to come. It's just about useable as an every day product but be aware that there are some strange bugs in it. It might be wiser to wait for 3.0 before you use it commercially. Me? I'm using it immediately! What's the joy in life, if you don't take a few chances now and then? **a**

## INFO

Price:

\$649 not inc.

(around £425)

\$110 inc. P+P

(around £80 Upgrade from V.2)

Contact:

Impulse Inc.

8416 Xerxes Avenue

North Minneapolis

Minnesota

55444

U.S.A.

Tel: 612 425 0557



**M**oney Matters from Digita International will substitute the need to find a willing marriage partner with a decent budgeting program for your Amiga. You'll need Workbench 2.0 or better.

Money Matters will allow you to create a budget to cope with your financial needs, whether you're a small businessman, a student or a millionaire. It's been designed to be simple to set up and manage, yet powerful enough to do almost anything you'll ever need from an electronic financial advisor.

Before setting up a new file, it's worth spending a few minutes looking through some of the samples which Digita has included. One of them may come close to exactly what you were about to spend time creating and, with a bit of adjustment, could be used for your own budgeting needs. These examples range from student to business and are fairly basic.

Starting from scratch reveals that you'll need to be one of the 90% to get along with this program; without a bank account, you're not going to get very far. Another example of the Government's breaking up of society into manageable - or increasingly unmanageable - chunks; an Orwellian Big Brother attitude?

card account, with different default icons for each. Inside these account windows, the more details you input, the better the budgeting system works for you.

Credit card accounts are almost purely debits. You can add codes to give each purchase a reference - this allows the annual budgeting and reviewing of your finances to be done with far greater accuracy - and track your payments to the account.

Far more interesting is the cheque account. You can include any direct debits or standing orders. Interest payments and share dividends, bank charges and cheques going in and out all make their mark on your starting balance (which can be backdated if you wish).

## reports

Other icons can be assigned to regular receipts or payments, a list of your abbreviations and reference markers, an up-to-date value for investments and even a TAX icon for the self-employed among you.

Having entered all of the data and become accustomed to knowing what money is where, you may want a report on your budgeting success in graph form. These may be printed

# MONEY REALLY MATTERS

**If you're disorganised,**

**Ashley Cotter-Cairns suggests you get married or use this new program to manage your money for you.**

out, to send to your bank manager as a Christmas card, or saved in IFF format.

While this may seem a little pointless for the average person in the street, think again. What happens if you have an unauthorised item appear on your bank statement? You may need proof for your sceptical bank manager that you are well on top of your finances and that you know exactly where that money should have been (or not).

A printed report of your accounts, with all expenditure of the type in question highlighted, could swing the balance in your favour. Remember that there is a thriving company in existence which makes its living by simply checking the bank charges levied on business accounts and correcting the errors. Mistakes happen all of the time and if your account is big enough then it can be a very worthwhile activity.

## budget day

So, what's the verdict? Can I dump my wife and replace her with a new Amiga?

Well, I could, but life would be a lot more lonely even if I knew where all my money was spent. However, making the judgement purely on my ability to keep track of the bills, I think that I could now safely take the helm as far as finances go - with the help of Money Matters.

The manual is very carefully written to take you in as deep as you need to go, with careful step-by-step instructions to guide you through each new part of the program. Money Matters looks every inch the professional.

And I finally understand the secret of good money management.

Reference	Amount
Assets	
Halifax Savings	2620.00
Natwest Current Account	1823.50
Liabilities	
Access Card	54.87
Total Assets	3643.50
Total Liabilities	54.87
Net Worth	3588.63

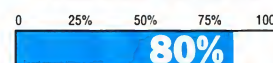
Money Matters produces a report on your financial status - oh dear!

It's as easy as keeping a track of what your balance really is, not what the cashpoint machine tells you it is, when you dare to ask. **a**

## Ratings: Out of 10

FEATURES	0 2 4 6 8 10
EASE OF USE	
SPEED	
DOCUMENTATION	
VALUE FOR MONEY	

## OVERALL RATING



## INFO

Price: £49.99 (£19.99 upgrade from Home Accounts)  
Contact: Digita International Ltd  
Black Horse House  
Exmouth EX8 1JL  
Tel: 0395 270273

TYPE	A/C	I/E	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
CARE	**		50.00	50.00	50.00	50.00	50.00	50.00
CASH	**		80.00	80.00	80.00	80.00	80.00	80.00
CDS	MC		0.00	0.00	12.00	12.00	12.00	12.00
CL	MC		30.00	30.00	30.00	30.00	30.00	30.00
COMP	MC		12.00	12.00	12.00	12.00	12.00	12.00
ENT	MC		20.00	20.00	20.00	20.00	20.00	20.00
GIFT	MC		20.00	20.00	20.00	20.00	20.00	20.00
HK	MC		50.00	50.00	50.00	50.00	50.00	50.00
HOBB	MC		30.00	30.00	30.00	30.00	30.00	30.00
HOLI	MC		0.00	0.00	0.00	0.00	0.00	0.00
PTRL	AC		60.00	60.00	60.00	60.00	60.00	60.00

Work out your budget (and then, if you're anything like me, ignore it).

## icons

Money Matters can design the icons for you, but you can of course incorporate your own if desired. Once created, a budget screen closely resembles a PC Windows front end, right down to the calculator and printer icons.

Behind each icon there is usually a window, containing the relevant part of the Money Matters program. A bank account can be a cash (or deposit) account, a cheque account, savings account or credit

TYPE	REFERENCE	VAL CODE
NCTT	Accountancy Charges	
NCTB	Business Tax	
CARE	Car Insurance	
CASH	Cash	
CDS	Car Loan	
CL	Computer Expenses	
COMP	Consultancy Charges	
ENT	Electricity	
GIFT	Postage	
HK	Printing Costs	
HOBB	Patrol	
HOLI	Rental of Premises	
PTRL	Repairs	
	Sickness Insurance	
	Stationery	
	Telephone Bill	
	Transfer Between Accounts	
	Wages	

Money Matters is capable of handling business accounts.





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NEW! - 50MHz  
ACCELERATOR + FEATURE CONNECTOR

## VIDEO GENLOCK FOR ALL AMIGAS



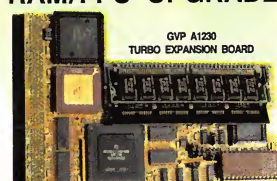
This extremely high quality Amiga genlock, from GVP, has an intuition-based software control panel with full ARexx and command line interfaces. Easy to use the G-LOCK genlock features many sophisticated attributes among which are:

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- Full Audio Support

**G-LOCK**  
£349  
**£299**  
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## ACCELERATORS FOR AMIGA 1200

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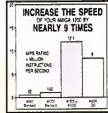


**ACCELERATOR** - The 68030EC processor on A1230 Turbo upgrades the normal Amiga 1200 processor (CPU). The new version is nearly nine times the speed of the 68020 in standard A1200s.

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### 68030 - 50MHz RAM/FPU + FEATURE CONNECTOR

The new GVP A1230-II is the most advanced accelerator for the A1200 yet.

- 50MHz 68030
- Built-in Memory Management
- Optional 50MHz FPU
- Up to 32Mb 32-bit RAM
- Unique Feature Connector

The new A1230-II has a custom feature connector which allows a whole range of state-of-the-art Amiga peripherals to be attached.

The first of these is a SCSI interface called the A1291, and is GVP's fastest SCSI controller yet. It features:

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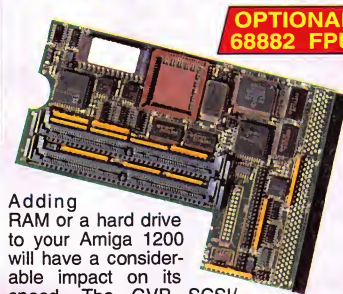
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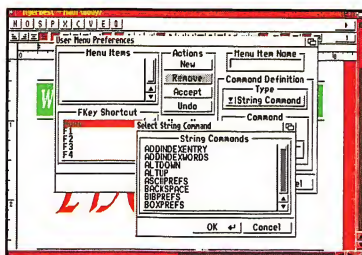
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Which computer(s), if any, do you own? ..... 68X

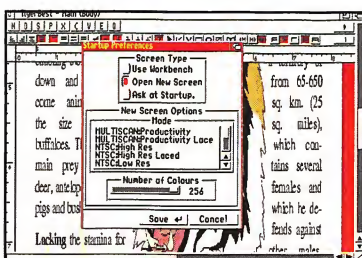
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**F**inal Writer is the first Amiga word processor intended for the few, rather than the many. An upmarket version of Softwood's Final Copy II, with a similar display, it offers many more bells and whistles, taking it close to the capabilities of a desktop publishing program.



The program's definable user menu can include macros, menu options and string commands.mentor



The start-up Preferences provide a choice of screen modes.

These include user-definable style sheets, which can be summoned up by a key press or a mouse click on a special menu, simple structured graphic tools to draw lines, boxes and ovals, master pages, multiple columns and the use of outline fonts.

Combined with these are such powerful word processing features as

capable of creating excellent results. Its flexibility gives it the edge over rival word processors, letting you customise it to your own tastes and needs.

This goes beyond being able to change the screen display and colours and to define text styles in advance and applying them with a click of a mouse button. Two rows of buttons sit at the top of the screen. One is standard stuff - it can be clicked on to produce changes in line-spacing, justification and paragraph styles. But the second row provides buttons that you can define yourself.

It is here that our flexible friend comes into its own. You can specify that a button will automatically operate a string command, an ARexx macro or any option available from the many menus - to open or close files, to bring up the spell-checker and so on.

You can define up to eight rows of buttons. There's a good selection of button icons to use, but an editor to define your own would have been a useful addition. Although only one of your rows can be on-screen at any one time, you can switch between rows instantly, so that you can have different settings for different purposes, according to the type of document you're writing or what stage in the editing process you have reached. Similarly, you can set up a user menu, which can also have keyboard short cuts allocated to its functions. These are features that you'll appreciate the more you use the program.

## fonts

Final Writer uses outline fonts to give the best-possible quality of printed

## Wildlife

## Report

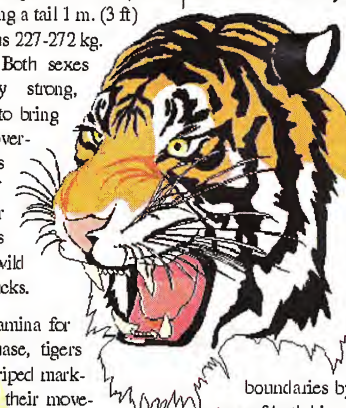
# The Tiger

**Large** striped cat of Asian jungle and mountain regions. One of the largest of the big cats, the tiger is 3-4 m. (10-13 ft) long, including a tail 1 m. (3 ft) long, and weighs 227-272 kg. (500-600 lb.). Both sexes are immensely strong, enabling them to bring down and overcome animals the size of buffaloes. Their main prey is deer, antelope, wild pigs and bushbucks.

**Lacking** the stamina for a prolonged chase, tigers rely on their striped markings to conceal their movements as they silently creep up on their victims before making a sudden rush from behind. They kill by first knocking the animal down with a blow of the forepaw, or pulling it down with the claws, then suffocating it with a powerful bite at the neck or throat. Tigers swallow meat in large chunks, using their teeth to cut rather than to chew, and eating up to 22.5 kg. (50 lb.)

**Tigers** spend the day sleeping or resting and emerge at dusk to hunt. Males are usually solitary animals, except during the breeding season. Each male marks off a territory of from 65-650 sq. km. (25 sq. miles), which contains several females and which he defends against other males, marking the boundaries by spraying a mixture of both his urine and scent.

**Tigers** once ranged all the way from China to Turkey, but today their range are largely confined to India and South-east Asia, with smaller popula-



Region of Habitat

Final Writer on an interlaced productivity screen displays almost a complete A4 document, showing that text can be flowed around a graphic on both sides in a two column setting.

since they can be slanted to the left as well as to the right.

One unusual feature is that you can alter the width of the fonts, from half to one-and-a-half times their

normal width. The size of fonts can range from four to 300 points in one point increments, which should be sufficient for most purposes. If you need greater control, you should be

# Final Writer

## John Walker tests a new top of the line word processor

the automatic creation of an index, a table of contents, a table of illustrations, endnotes (but not footnotes) and bibliography, as well as such standard essentials as a dictionary, thesaurus and mail-merge.

It's very impressive, but it is not for everyone. Only power users need apply. Final Writer demands a hard disk - and, even with one, it can be slow if you're using an Amiga 1200 and create a document that uses lots of graphics.

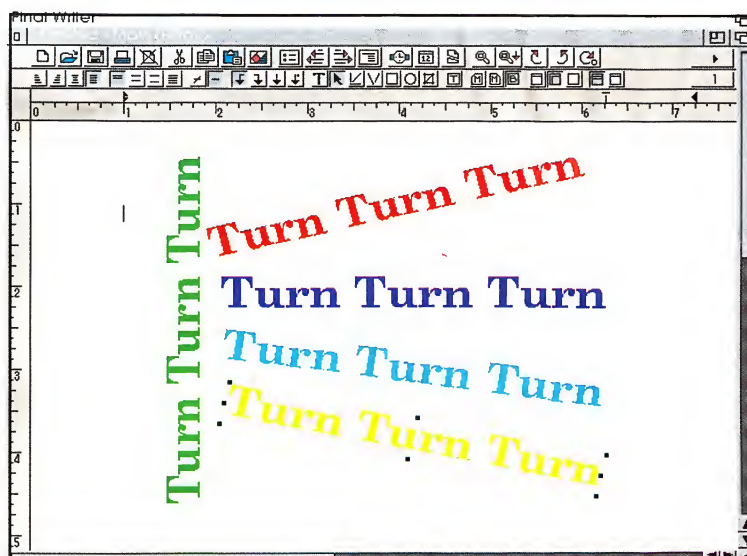
## 7 disks

It also needs Workbench 2.0, a minimum of 1.5MB of memory in which to run and at least 2.5MB of hard disk space. If you install all of its seven disks, which include a generous helping of fonts and graphics, then it will occupy 9.5 MB. As you would expect from such a big program, it's

output. It is compatible with Compugraphic fonts and Adobe Type 1 fonts, both of which are in plentiful supply and can be picked up inexpensively from the public domain. But it also introduces a new outline font technology to the Amiga: NimbusQ, which it claims is faster than the others.

With the program is a generous selection of NimbusQ fonts, which should be sufficient on their own for most purposes. These include ten sans serif and ten serif fonts in roman, italic, bold, and bold italic styles as well as twenty decorative fonts, ranging from art deco to script and stencilled faces.

You have a choice of upper- and lower-case, capitals, and small capitals. Fonts without their own italic face can be set at any oblique angle you specify to give the appearance of italic or to create unusual effects,



Text can be treated as a graphic and rotated to any angle.



using a DTP program.

Final Writer is particularly good for those who like playing around with text, since you can create a 'text block' that can be treated as a graphic. The block is limited to 37 characters, but its size can be altered and it can be rotated at any angle.

Graphics created using the simple tools provided - lines, ovals and rectangles - can also be rotated. Imported graphics, though, cannot be rotated although they can be cropped or scaled. The program can use bitmaps in IFF format, but, more helpfully, it can import graphics in EPS (Encapsulated PostScript) format and output them to a dot-matrix or inkjet printer as well as to PostScript-compatible lasers.

EPS has the advantage of all

other word processors, the result can look ugly if there are more than two columns to a page. I wish it were possible to define variable width columns rather than having all columns of equal width.

A page can be viewed, and edited, not only in its normal size but in 25, 50, 75, 150, 200 and 400 per cent sizes, although you can only see one page at a time. The program can be slow in use, particularly when loading a document containing many graphics or changing the page view. But its results, using the Workbench printer drivers, are impressive. Using an HP Laserjet, I found it took around six minutes to print a page containing a great deal of graphics. A page of text took two minutes and I was impressed by its quality.

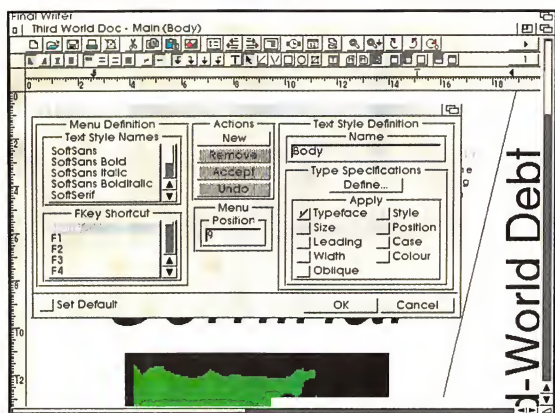
an unnecessarily long-winded process.

Nor is it possible to import text created with another word processor, apart from Final Copy which is completely compatible for text and graphics. With all other word processors the text will be imported but will lack all formatting and styles, such as italic, bold or underline. If you try to import text from another graphic-based program like Wordworth, your screen will be filled with all kinds of garbage.

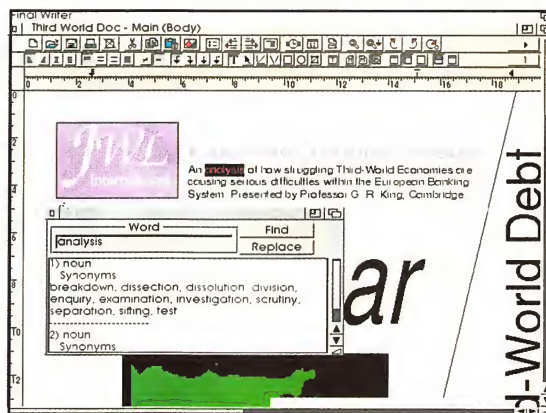
Final Writer isn't difficult to come to grips with, but it could be more user-friendly for the less experienced. A title bar reminding you which typeface in what size you're currently using would be a help. An online tutorial for newcomers would also be

example, includes a hundred levels of undo, so that you can go back to earlier versions of a document. Final Writer lets you keep only one section of text in a clipboard, which isn't much. Programs like Word 6 also provide templates for various documents, such as calendars, letters and CVs, and include an autofont feature that will format your document for you.

Although the Final Writer has hyphenation, and allows the user to create a 'hot zone' for the feature to work, it lacks kerning, which can be useful for improving the appearance of



Text styles can be defined and allocated to a function key.



The Thesaurus pops up in its own window.

structured graphics: they print at the highest resolution of your printer, don't have the jaggies of bitmapped graphics and can be displayed at any size without loss of resolution.

One drawback here is that, although you can crop and scale EPS graphics, you cannot edit them within the program.

Final Writer is supplied with a good selection of such images and there are more available, either commercially or in the public domain, particularly for the PC and Macintosh. EPS graphics have the advantage of not only giving excellent results but of being compatible across the range of computers. You can use EPS graphics created on a PC or a Macintosh - providing, of course, that your Amiga can read PC or Mac disks.

Be warned, though. While the images supplied, ranging from insects and animals to office furniture and cartoons, can all be viewed on screen, some EPS files from other sources will show up only as boxes, which can make their exact placing difficult.

## colour

Graphics can either be saved with a document or just hot-linked to the document to conserve memory. They can be displayed in up to 16 colours, depending on which screen mode you use, but will be printed in 4096 shades. You can even output to a colour Postscript printer, but you can't create four colour separations.

Text can run round graphics either to the left or right or follow its contours, but you can't have a graphic surrounded by text unless you set the text in columns. Final Writer allows up to six columns a page, but, as with

The program can output to a PostScript-compatible laser and will download any fonts needed to the printer, something no other Amiga word processor will do. But it was frustrating to discover that the program as it stands provides no way of accessing a PostScript printer's own range of fonts, which seriously limits its PostScript usefulness.

In a way that's typical, since Final Writer, for all its sophistication, also misses some essentials. You cannot easily insert a file in your document. You have to open the second document in a new window and cut and paste between them to insert text,

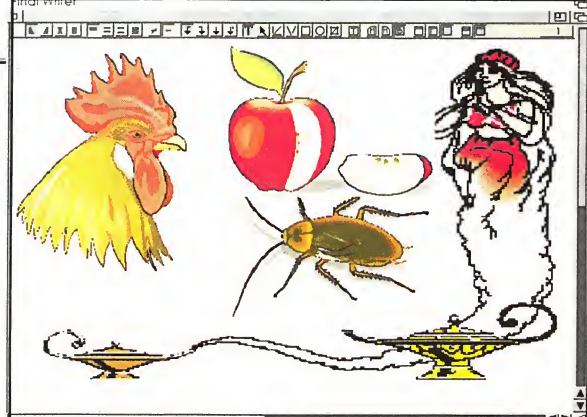
better than working through the manual, especially when dealing with the trickier aspects of the program, such as creating an outline for your document. Many word processors these days have facilities for taking you step-by-step through such features.

A help feature would also be appreciated. With up to eight rows of customised buttons, it can be difficult to remember which icon does what. It's a pity the program doesn't include a note system that pops up explaining an icon's function when you leave your pointer on it for a moment. That's something that worked well in PenPal, from the same team of programmers.

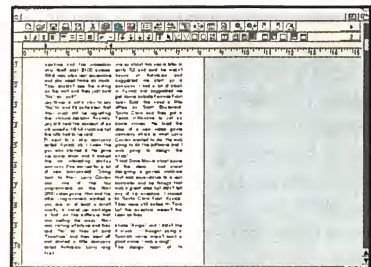
Final Writer's advertising invites comparison with PC and Mac programs. But it can't really compete with the best that rival machines can offer - although it's fair to add it costs a third of an equivalent PC word processor. The PC's Word 6, for



A selection of the decorative outline fonts supplied with the program.



Some of the 100 graphics in Encapsulated Postscript format that are supplied with Final Writer.



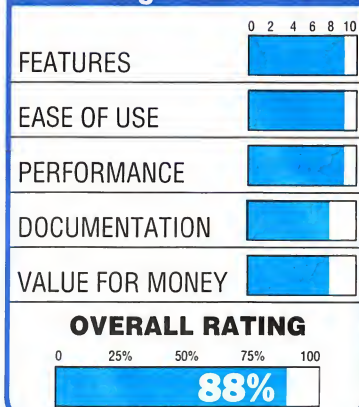
A page of text viewed at 50 per cent of its normal size.

headlines. And it provides no control over widows and orphans, those ugly short lines of type at the bottom or top of a page, apart from telling you that they should be avoided. Other improvements, standard on many PC programs, would include an equations editor, graphing facilities, a grammar checker and a table editor.

## conclusion

Quibbling aside, Final Writer is a powerful program that produces excellent results. At the moment, it is the last word in document-processing on the Amiga, providing many frills and not a few thrills. And for anyone intending to produce quality documents using the Amiga it is very well worth considering as a top of the line word processor. **A**

### Ratings: Out of 10



### INFO

Price: £129.99

Contact:

Softwood Products Europe  
New Street, Alfreton  
Derbyshire, DE55 7BP  
Tel: 0773 836781



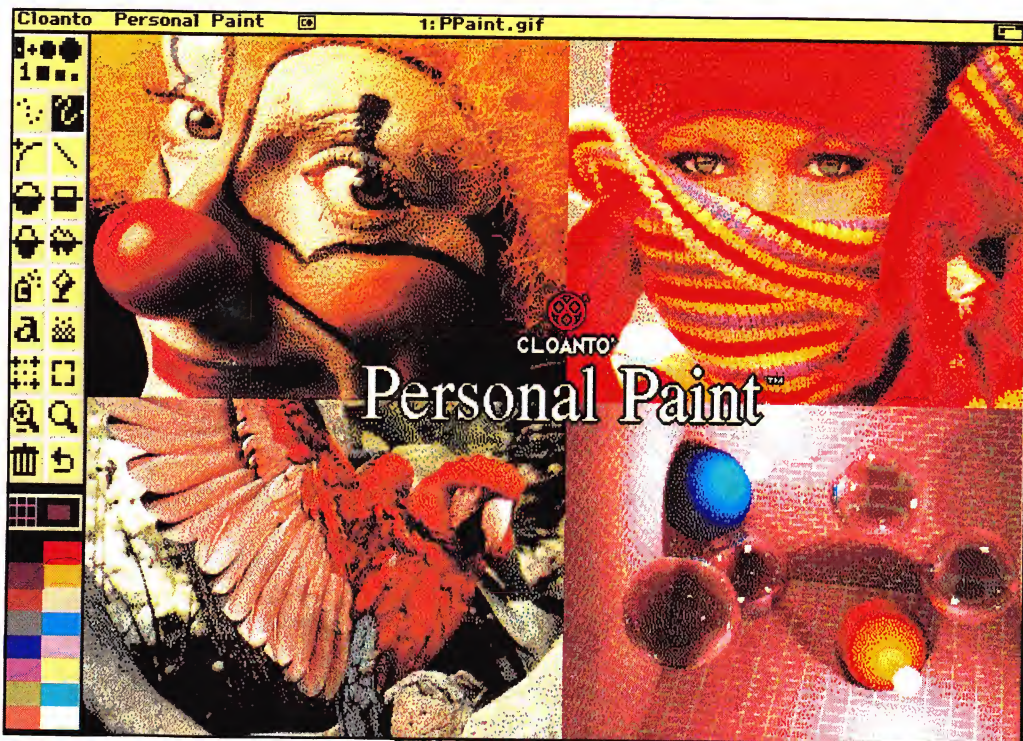
# PERSONAL PAINT

**D**eluxe Paint has always been considered the standard by which Amiga paint packages are judged. A few months ago, Brilliance popped up which rocked the boat in its favour, but it left people who can't afford to buy the high price of Brilliance with a very small choice of software.

But another paint package has quietly matured into a highly competent piece of software with lots of interesting features and priced especially for the mass market. I am, of course, talking about Personal Paint, or PPaint for short.

**au**i have been fortunate to get our hands on a brand new version of PPaint, version 4. Normally when I review an upgraded version of software I make

You've seen how good Personal Paint 2, our Coverdisk program, is. Now Gary Fenton discovers the very latest version of this outstanding paint package.



PPaint has done a great job converting these images down to just 16 colours.

24 bit IFF images can

be loaded and are

automatically

converted to the

maximum number of

colours your Amiga

supports.



The new JPEG datatype loader gives superb results!



# IAL 4

comparisons with its previous release, in this case version 3. But because you lucky **au**i readers have got your mitts on our cover mounted copy of PPaint 2, I'll be making all comparisons between versions 2 and 4.

## ch-ch-changes

Some new features are quite small, whereas others are large steps in the programs development. Personally, I welcomed the JPEG loader with the most enthusiasm. Sadly, the JPEG loader is not built-in to PPaint, but comes as a separate Workbench Datatype for use with Workbench 3 onwards. This means that owners of pre-3.0

machines can't load JPEG images, which is a pity, though all the growing band of 1200 owners will be delighted with it. And there are many more new features from which everyone can benefit.

Have you ever tried drawing in a high resolution when the Amiga slows right down and your brush moves in "jumps"? PPaint 4 has a brilliant solution to this common problem. Turning on the Caps Lock key on the keyboard initialises a "smooth move" mode. Normally the Amiga's operating system discards mouse movement data which can't be processed in

real time. The new mode stores all of your mouse movements, every last curve, and draws without any loss of information.

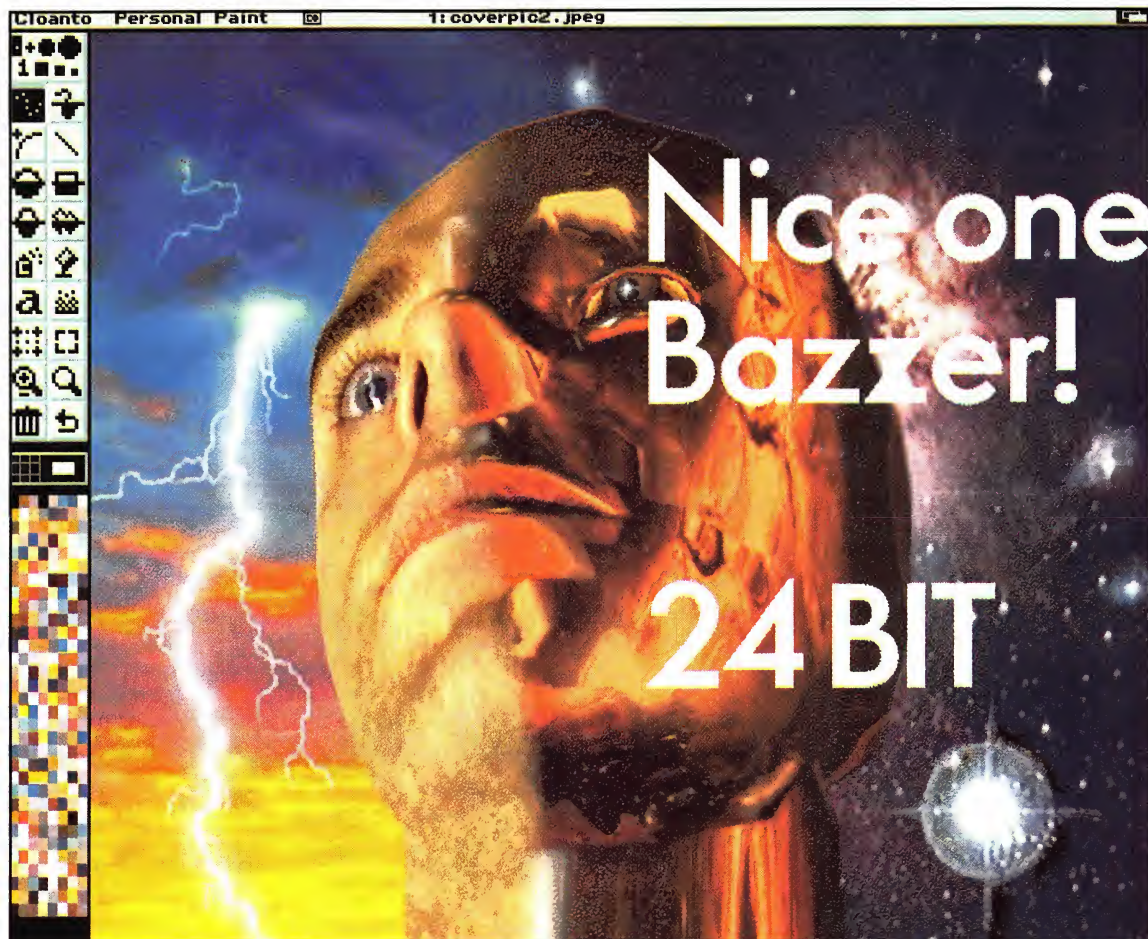
For people who don't like moving the mouse (?), you'll be please to learn that PPaint now uses hotkeys for selecting text gadgets. What does this mean? Well, instead of clicking on Proceed, Cancel, and other buttons, you can simply press a key on the keyboard instead - identified with an underscored character (\_). So if Proceed had an underscore underneath the letter P, just press the P key.

## font front

Font handling on PPaint has always been fantastic. I like the way that you can type directly over the screen and still use the cursor and delete keys for editing, even if you've typed in a whole screen full of text.

The font requester has been changed for the better and now has two scrollable lists. One for the font

*c o n t i n u e d*



24 bit images take time to load but the results are fabulous!



PPaint's image processing features at work creating a rather nice oil painting effect.



Etched in plaster: The Emboss High effect.



A graduated effect: I made the light on the right appear very bright. You can do the opposite to even out photos taken in bright light.



## PERSONAL PAINT 4

continued

names and other for font sizes. The sample text in the font requester can be scrolled using the left mouse button, so you can see an example of every letter rendered in the selected font.

### new file format

PPaint will load JPEG images and it will also load some previously unsupported file formats. 24 bit IFF images can be loaded and are automatically converted to the maximum number of colours your Amiga supports. i.e. 256 colours on the A1200.

Personal Paint 4 has a

brilliant solution to this

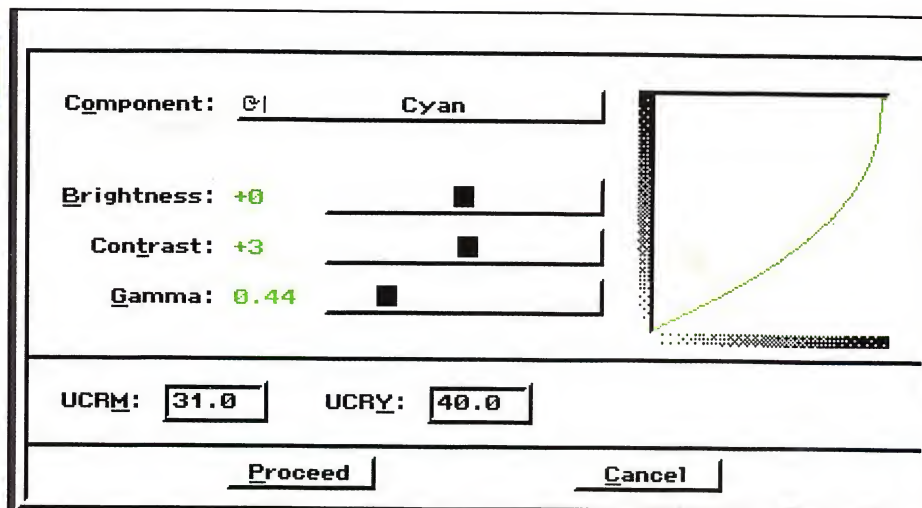
common problem.

PPaint uses colour quantization and reduction algorithms after loading 24 bit files to ensure you get the best image quality compacted into 256 colours. The conversion process is very slow but the wait is certainly worth it. Some converted 24 bit images look just as tasty in 256 colours as they do in true 24 bit! You can also load in HAM and HAM8 images now without them being rejected. However, all HAM images will be converted to 256

colours automatically by PPaint.

### Retargetable

PPaint now features RTG support (retargetable graphics) for Picasso, Retina, and all the other graphics cards that use RTG. The RTG mode in PPaint ensures that the blitters on the Amiga and graphics card don't conflict when it comes to read/writing to RAM. Unfortunately I don't have any RTG cards to test this new



The new printing correction menu makes the most of your printer.

### printing

If you have a printer then you may know that the Amiga's printer preferences is limited to printing

processing tools and automatic hardware scrolling of super bitmap screens.

Version 4 offers the same painting tools and functionality of version 2 but dramatically improves

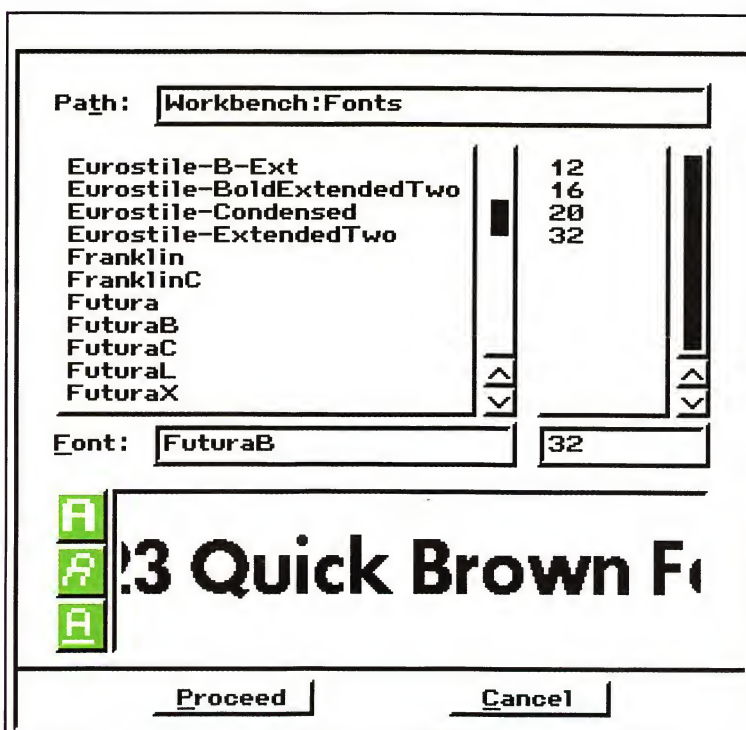
**The dithering routines**

**have been rewritten to**

**optimise the quality of**

**your printed pictures.**

on file handling (24 bit, JPEG etc), printing quality, and dithering routines. The most impressive thing is the price. It's a shame it doesn't yet support HAM screen modes, but as a register colour paint package with image processing, it's very much a worthwhile addition to anyone's software collection.



The new font requester with scrolling font preview.

function out on. Will someone lend me their Picasso? Hmm, thought not.

only 4096 colours. PPaint 4 gets around that problem and will send 24 bit colour or 8 bit grey data to your printer, providing it can handle it. The dithering routines have been rewritten to optimise the quality of your printed pictures.

Selecting "Set" from the printing menu will bring up a new window containing brightness, contrast, and gamma correction sliders. These can be used with 24 bit accuracy for adjusting the resulting output from your printer. Cyan, magenta, yellow, and black components can be adjusted individually.

### conclusion

As you've found out for yourself, PPaint 2 has many great qualities. My favourites are the image



Text gadgets can now be selected using the keyboard.

### Ratings: Out of 10

FEATURES

EASE OF USE

SPEED

PERFORMANCE

VALUE FOR MONEY

### OVERALL RATING

0 25% 50% 75% 100  
**90%**

### Info

Price: £59.99

See Special Offer in this AUI  
see page opposite

Contact: Meridian

East House, East Road Trading  
Estate, London SW19 1AH

Tel: 081 543 3500



# UPGRADE YOUR COVERDISK

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version 4 supports Retargetable graphics using Picasso, Retina boards etc, and now gives professional 24-bit printing in both colour and black and white. High quality conversion of IFF24, PCX24, HAM and HAM8 to 256 colours; loading of files through Amiga Data Types (JPEG, BMP etc), and now includes a collection of third party utilities, including Kara Fonts, JPEG Dta Type, and before any other package, the new improved Commodore Amiga Deskjet 500C and 550C printer drivers, plus many more improvements, including sophisticated image processing functions: programmable effects (like emboss, sharpen, blur, etc.), intelligent colour reduction and remapping, palette merge, up to nine brushes, two different working environments, text editor, colour fonts, Amiga clipboard, PostScript Driver, customizable user interface with stereo sound effects, screen grabber, a full disk of 256 colour images. 1Mb RAM, 1 disk drive required; 1Mb Chip Ram recommended.  
~~normal rrp £59.95~~ ..... **£40.00 inc vat**

### Personal Fonts Maker

The Personal Fonts Maker is a powerful tool for designing and processing fonts. Amiga fonts and fonts created with the Personal Fonts Maker can be transferred to the printer memory and printed at maximum quality and speed. The Personal Fonts Maker can output fonts in formats which can be read by other Amiga programs, by other computers and by a vast range of different printers (including 48-pin and laser). The program can handle IFF graphics. It is possible to work on a typographical font input from a scanner. Repetitive transformations can be recorded and re-run as macros. A special programming language can be used to define the format in which fonts are to be saved or sent to a printer. Package includes a multitude of original fonts and support tools, like the Printer Driver Modifier. It is easy and fun to use.

512Kb RAM, 1 Disk drive required, 1Mb recommended.  
~~Normal rrp £59.95~~ ..... **£40.00 inc vat**

### Personal Write

Personal Write is an extremely fast word processor packed with original capabilities. It fully exploits unique Amiga windows and multitasking, does not limit the number of text windows which can be displayed at the same time, and has a built in spooler for background printing. Personal Write can encrypt confidential documents, and save disk space by compressing texts. Most character sets and formats from different computers can be loaded and saved, and control codes added or removed, as

required by DTP programs or Amiga system functions. Hard disk installable if required. Mail merge facilities, pictures can be loaded and printed, keyboard shortcuts are user definable as is the user interface. Thousands of printer settings available, including PostScript, multistrike print mode, automatic justification with proportional fonts and Personal Fonts.

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# Switching Channels

**N**ow, here's an interesting package.

AirLink. Some software and a little infra red device which plugs into the computer. Run the software and what's this? It's a TV remote control panel – cool! Aim the infra red device at the TV, click on one of the buttons on the panel and, err, nothing happens. OK, switch on the telly and try again. Hey! It works! Look at that, I can change channels using my Amiga. WOW, this is what Tomorrow's World is all about.

Time to read the manual and find out how it works properly and what else it can do.

The small infra red device plugs into the joystick port of the Amiga and is capable of receiving as well as transmitting infra red signals. This enables the software to 'learn' new signal types, a clever feature which will allow the package to control virtually any IR controllable piece of equipment.

AirLink uses AIR windows, which are Workbench equivalent remote control panels. Several examples are supplied, ready for use, but these look very boring and hardly conjure up excitement about the possibilities of computer remote control.

This brings us along, and why not?, to AirLink's strongest feature. It wouldn't be much use if it only supported a limited range of equipment and so completely user defined control panels can be built up and matched to a new set of IR signals.

Creating a custom AIR window can be a little tricky. The easiest method is to use the pre-made AIR windows, which can be altered to suit the your equipment. Alternatively, a completely new window can be built. You can do this in a number of ways, such as creating the panel with an art program or even scanning in a picture of the real thing.

## tricky

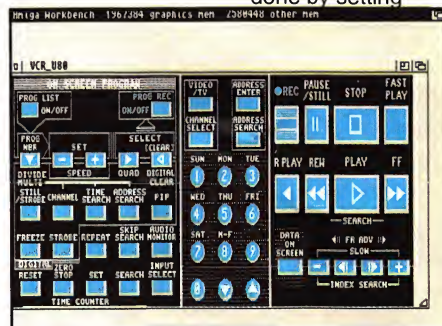
The next step in creating a custom window is the tricky one, since each 'gadget' must now be defined as a true gadget. You do this by using the supplied generic controller,

**Patrick Howlett test drives a unique device that remote controls the Amiga and lets you zap through your TV channels too.**

which must be replaced with the newly created template. Then you use the gadget 'add' option to select the top left corner of the gadget with the left mouse button and drag the pointer to the bottom right position of the gadget.

This must be repeated to 'give life' to every gadget in the window. A useful facility at this stage is the 'flashing' option, which visually indicates which gadgets have been defined. However, I found that it took quite a long time to set up properly even just a few gadgets, the problem being the freehand nature of the operation, which is just too prone to error. A method involving sizable fixed boxes which could be stamped down to define gadgets would be invaluable here.

Now comes the technical part, where every gadget must be trained to generate the correct IR signal. A program is supplied for sampling IR signals and this is used



One of the more complex AIR Windows supplied.

in conjunction with the AIR window editor to define the signal for every gadget. You select a gadget and, with the sampler ready to receive, press the corresponding button on the IR controller while pointing at the IR box. The sampler

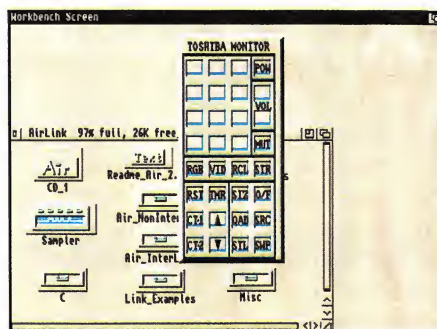
should capture the waveform and you can now assign it to the AIR window gadget.

At this stage, it's useful to test the signal to see if it works, since some fine tuning can pay dividends. The IR burst setting in particular should be reduced to the smallest number that works correctly as this will speed up the whole operation of AirLink.

## saving

Once each gadget has been associated with a signal the operation is complete. The file is saved as a normal IFF brush, but an additional ILBM chunk, the IRED chunk, is used to store information about the AIR window.

To use an AIR window, you call up the tool 'AIR'. This is normally done by setting



All the functions are there. It may not look very special but it's unique.

up the default tool type of the AIR window icon. The control panel appears and clicking on the gadgets sends the appropriate IR signal from the transmitter.

After an initial period of familiarising myself with

AirLink, I became very impressed with the package. If you spend a little time setting up the operation of a particular control panel, you can generate a very stable and flexible environment.

More complex applications can also be developed using Link Commands which generate output events in response to input events which is very powerful. For instance, midi events in the form of midi-in signals could be used to trigger IR signals. This gives true multimedia capability. ARExx can also be used in a similar way, controlling external equipment in response to ARExx messages, all completely defined by the programmer.

## conclusion

AirLink is the only product of its kind. This, and its overall flexibility, means that any slight niggles shouldn't really come into

the equation. However, it is needlessly fiddly to set up and requires a decent editing program to turn it into a polished product. As it stands, it works very well and offers interesting multimedia

capabilities, but it requires a lot of user effort to make it do more than just replace the TV remote control. But if you really want something unique on the Amiga –

and to astound your friends – AirLink is certainly a very interesting product. **a**

## INFO

Price: \$100 (about £60)

Contact:

Geodesic Designs Inc.

P.O. Box 956068

Duluth

GA 30136

USA

Tel: 404 822-0566

## Ratings: Out of 10

FEATURES

EASE OF USE

PERFORMANCE

DOCUMENTATION

VALUE FOR MONEY

## OVERALL RATING

0 25% 50% 75% 100  
**78%**



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SHOWN WITH UNIVERSAL FEEDER TOP TRAY (OPTIONAL EXTRA)

The 4Mb RAM version can print a full A4 page of graphics at 400 dpi and makes full use of the LP1200's 400 dpi printing capabilities, such as using Microsoft Windows fonts. Unique additional standard features include FLASH ROM 'future proof' technology and LAYOUT - a powerful document description language. The LP1200's unique internal FLASH ROM, which holds the printer controller firmware, can easily be updated as new developments in technology occur. This protects the investment you make in buying a Ricoh LP1200. Other manufacturers would require you to buy a new printer! Internal FLASH ROM and industry standard FLASH ROM PCMCIA cards can also be used to permanently store fonts, macros, graphics and extra emulations. Again, unlike the competition, the LP1200 includes LAYOUT, a powerful and intuitive document description language as standard. This offers unique opportunities to develop custom made printing systems. Forms and document templates can be designed complete with logos and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

The LP1200 comes with a 100 sheet A4 paper tray as standard. An optional universal feeder automatically feeds up to 150 sheets of paper (up to 169gsm), 15 envelopes, transparencies and labels.

### CONSUMABLES + ACCESSORIES

PRODUCT CODE	PRODUCT DESCRIPTION	PRICE EXC VAT
CAB 7500	Cable for PC/ST/Amiga	£8.47
KIT 5200	Laser Starter Kit inc Cable	£12.50
LAA 5238	Universal Feeder (2nd Tray)	£85.00
LAA 5262	2Mb RAM Module	£85.00
LAA 5210	Developer/Toner Cartridge	£65.00
LAA 5225	OPC Cartridge (Drum)	£85.00
LAA 5312	A4 Paper Tray (100 Sheets)	£35.00
FAX 1200	Ricoh Fax/Modem Software/Firmware	£120.00
MOD 7199	Pace Microlin FX Fax/Data Modem	£180.00
LAA 5279	Ricoh Flash ROM Card (0.5Mb)	£49.00
LAA 5288	Ricoh Flash ROM Card (1Mb)	£199.00
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 \*Note: A4 paper tray is already included in the printer price. More A4 trays can be purchased to feed different coloured stationery.

FEATURES	IBM 4025-020	FUJITSU VM600	CANON LBP-4 PLUS	STAR 8111	RICOH LP1200
Average Sheet Price (excl. VAT)	£929	£699	£659	£899	£699
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3 Driver @ 400 dpi	-	-	-	YES	YES
Print Speed	6ppm	6ppm	4ppm	8ppm	6ppm
Straight Paper Path	-	NO	(ONLY FACE UP)	YES	YES
PCL 5 Printer Command Language	-	YES	-	YES	YES
HP-GL/2 Vector Graphics Included	YES	YES	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	1Mb	1Mb	512K	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	33 secs	25 secs	<60 secs	60 secs	45 secs
First Page of Text Output	-	15 secs	31 secs	18 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Flash ROM Upgradeable Firmware	-	-	-	-	YES
PCMCIA Card Slot	-	-	-	-	YES
Scaleable Resident Fonts - in HP LJ III Emulation	0	8	0	8	8
Resident Bit-Mapped Fonts	10	14	2	14	14
AGFA Intellifont Scaleable Font Technology	-	YES	-	YES	YES
HP LaserJet III Emulation Included	-	YES	-	YES	YES
EPSON FX Emulation Included	-	YES	YES	YES	YES
IBM ProPrinter Emulation Included	-	YES	YES	YES	YES
Standard Tray Capacity	200	150	70	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.9p	2.0p	2.1p	2.2p	1.65p
Min-Max Paper Weight in gsm	60-163	60-157	60-105	60-135	60-159
Ability to print on OHP Film	YES	YES	YES	YES	YES
Ability to print on 169gsm card (Manual Feed)	-	-	-	-	YES
Standby - Noise Level	38dB(A)	35dB(A)	<43dB(A)	<43dB(A)	<39dB(A)
Printing - Noise Level	50dB(A)	46dB(A)	<53dB(A)	<53dB(A)	<48dB(A)
PC Independent PLAIN PAPER FAX OPTION	-	-	-	-	YES

\*\*As quoted by manufacturers - July '93

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## Barry McCarthy test drives a set of special 3D programs designed by Alternative Image to help you create your own graphic reality.

**A**lternative Image have released the second volume of their popular 3D textures series. Just to clarify, these are pictures, not mathematical textures, as are Essence and those included with Imagine.

The package includes: ClassicMarble, Cork, FleckMarble, RockFace, Sand, SeaStone, ShellStone, StoneBits, TreeBark2, VeinStone, WaterStone, WebMarble.

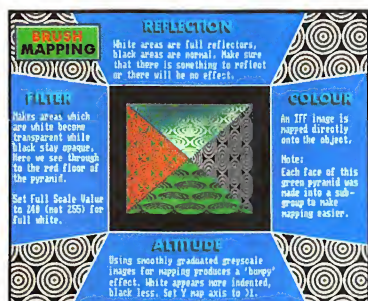
There are twelve disks containing the twelve textures in several image formats: 8 colour (colour), Bump (8 colour black & white), HAM (6), IFF24.

Also included in the package are a set of 'bonus disks'. These can be in Real 3D or Imagine format and contain some interesting stuff that I'll get to in a minute.

Back to the textures. Well, they're very nice as usual with Alternative's products. They always present them quite greebly, in this case, in a video case.

The pictures are of good quality. The whole point about them, is that you have to use your imagination to realise their true potential. They are not to be appreciated "as is" but to be used as tools. And what are they to be used for? Just in case you weren't quite sure, here's a quick explanation;

When you build objects in 3D programs, you give them a colour and some surface properties, like shininess and transparency. The trouble is they often look a bit boring and computery. We need to jazz them up, by wrapping a photograph or drawing over the surface. All 3D programs will allow you to do this in a number of different ways



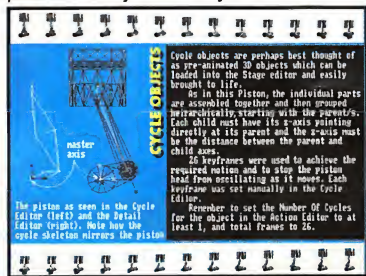
Four brush mapping techniques.

What you need are some nice clear pictures to use as these wraps. If you want a tree to look more like a real tree, why not take a photo of some bark and wrap that round your virtual tree?

### maps

Well, that's one way to use these types of textures but there are other, more esoteric applications. They can be applied as bump maps, where the relative brightness of pixels in the image will determine how high or low that bump will be. If you're still not sure what I mean, look at the pix. Brush maps can also be used as reflection maps or transparency maps, where the colour of pixels determines the level of reflectance or how transparent that area is. Get the idea? Of course, this is all further complicated by the ability to have several (or in the case of the latest versions of Real 3D 2 and Imagine 3, unlimited) brush maps and mapping techniques on top of each other. Fun.

Anyway, so who buys this product? If you have your own



The piston animation cycle. colour camera and digitiser or colour scanner AND you have access to high quality images or materials, you can, of course, create your own textures very easily. If not, then it's probably you.

### bonus!

Free with every box of textures!  
Two disks of 'things' for your

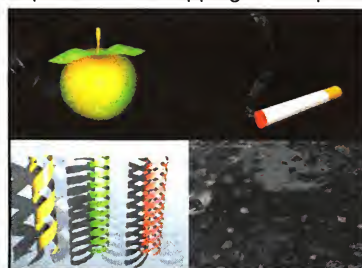


Never mind the width feel the textures.

# Imagination Tools

favourite 3D program. Let's take a gander at the 'things' and see if they're worth it.

The 2 bonus disks can be for Imagine or Real 3D and contain the following: IMAGINE (up to version 2) Projects: FourMaps; explanation of mapping techniques.

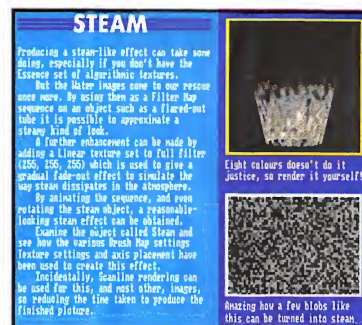


Apples, cigarettes and spirals - all unreal.

Piston; Cycle building. Steam; how to create steam. Water; moving water. WorldMap; rotating Earth. Objects: All the objects needed for the projects. Pix: All the pictures needed, including the animated water brush map.

REAL 3D (up to version 1.4.2) Animations (projects): Hierarchy; help with hierarchical construction and manipulation. FreeForm; using freeform meshes and curves. ClipMaps; explanation of what to use them for. Stripes; animated texture. FogSFX; swirling fog effects. Objects/materials/maps; all the necessary files for the above animations.

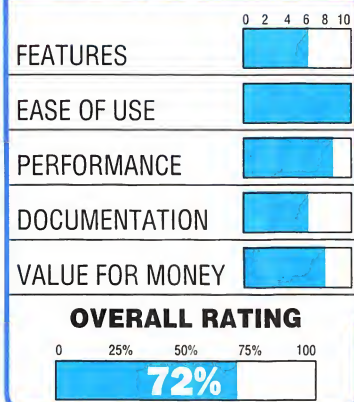
I know this is all a bit listy but there isn't a better way of knowing whether the disks will be of interest to you. And they are. The projects are really well put together and genuinely useful with some of the



Letting off steam.

more complex areas of the two programs involved. I think these disks make the £40 price tag reasonable but even better, is that they can be obtained separately for £10 each and that really is good value. **a**

### Ratings: Out of 10



### INFO

Price: 340.00

Contact: Alternative Image

6 Lothair Road, Leicester LE2 7QB

Tel: 0533 440041



# test drive **Size Isn't Everything**

**W**hat's a magneto optical drive? It's really neat, that's what. It's about the size of a slightly larger than usual floppy drive. The disks that it uses are also about the same size as standard floppies, maybe slightly thicker.

So what's so great about it? Each disk holds around 128 megabytes of data and the read and write speeds are close to conventional hard drives. That's what.

How do you install it then? Is it tricky? No, simple (usually). Most MO drives come as internal, which daisy chain on the usual 50 pin SCSI ribbon cable. Yes it's a SCSI device and acts just like any other SCSI device. Or you can go for the external version, with its own case and power supply. This connects to the external 25 or 50 pin SCSI port on your SCSI card.

To install the drive, after you've connected it, simply use the installation software with your SCSI card or HDTToolBox that comes with Workbench.

Let's assume everything goes OK and your MO is now part of the system. Each disk must be partitioned and then formatted before you can use it. Also make sure that you have a disk in the drive and that it is switched on (if it's external) before you boot your Amiga or it won't mount the MO.

Now it can be used like any other hard drive, with work or programs loaded from or saved to it in the usual way.

## advantages

Limitless storage! Disks cost around £35 each (shop around). That's 27p per MB and you can eject and replace with a fresh one at any time, while you're working, just like a floppy. They're also very fast (a little slower at writing). Lastly the external version can, of course, plug into any SCSI card on any other Amiga. Very handy.

**It can be used like any**

**other hard drive, with**

**work or programs**

**loaded from or saved**

**to it in the usual way.**

Wow! They sound so brill, how come everyone hasn't got them? Ah, now we come to the slight disadvantage. The price. Expect to pay around £650 for the external Fujitsu. Oooch! If you already looked at advertised prices in **AUI**, you might think I got this figure wrong. Well I



The Fujitsu Magneto Optical drive, lovingly and artistically displayed by Mr McCarthy.

**Barry McCarthy tests out a neat magneto optical drive, Fujitsu's M2511A, and a passionate love affair is the result.**

**HINT:** If you want to use HDTToolBox with your particular SCSI card, simply click on the HDTToolBox icon and using the 'information' menu on Workbench, add a new Tool Type as follows:

`SCSI_DEVICE_NAME=gvp SCSI.device`

This will now work with my GVP card but you will have to change the device bit to suite your own card.

Now go through the usual hard drive partitioning and prepping procedure as outlined in your manual. As far as the software is concerned, the MO drive is just like another hard drive.

**HINT:** Each hard drive must have a different ID number. NEVER connect 2 with the same number or you might damage either the hard drive or the card. Most drives have a set of jumpers to set this ID. Consult the manual for the drive but if you have ANY doubt, then give the shop or the manufacturers a ring. I rang Fujitsu in the UK and they were very helpful, but be prepared for unhelpful companies as well, they're not all as nice as Fujitsu. Luckily this drive has a neat little button that you press with a special tool, to select a visible number for the ID. Marvellously user-friendly.

**HINT:** Most drives also have another set of jumpers to determine other internal functions. Most of the time these can be left alone, but if your drive won't be recognised, you may have to ring for info and change them. Probably not.

**HINT:** On some older SCSI boards, you may have to connect the new drive as the ONLY connected drive, to set it up for partitioning etc. This is for REALLY old boards, which may not be able to recognise and control MO drives anyway. If this is the case you have only one option: a new SCSI card. Sorry, I don't make the rules.

**HINT:** The ENDS of the SCSI chain must be terminated with terminating resistors. Say that again for humans?! If you have the external unit, make sure that the supplied BLOCK is plugged into the spare socket on the back of the drive.

haven't, it's just a matter of looking in the right places. Try Mac and PC mags too.

**Wow! They sound so**

**brill, how come everyone**

**hasn't got them?**

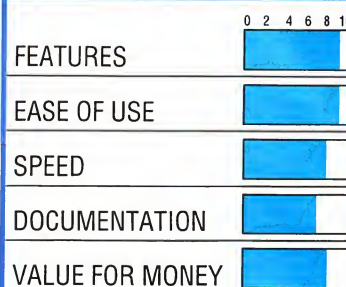
**who?**

The MO user is the person who needs a LOT of fast storage that can be filed away and retrieved at a later date. Someone who's into DTP, 3D, animation, multi-media. The MO is ideal for holding quickly accessible libraries of fonts, objects, pictures, textures, docs, animations... It's expensive, but I love it and we will never be parted, kiss kiss kiss kiss slobber...

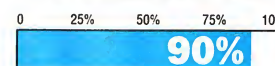
## conclusion

The Fujitsu Magneto Optical drive has been thoroughly tested with the standard GVP SCSI card (now the A4008) and the Z3 FastLane SCSI card (which is fab). It performs flawlessly and can be transferred to either at any time (oh yes, make sure the power is off before you do this!). A highly recommendable product. **A**

### Ratings: Out of 10



### OVERALL RATING



## INFO

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Contact: C&T, 39 Ansell Road,

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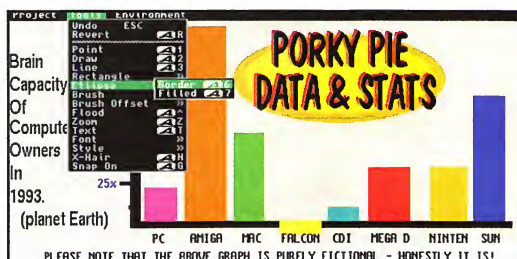


## **Not all paint packages are alike, as Gary Fenton found test driving RPaint, a new, completely programmable one from MegageM.**

The idea of a programmable paint program sounds very promising. I just had to think of the presentation and multimedia applications and was eager to put RPaint through its paces.

A quick flick through the manual told me how RPaint writes ARexx scripts for you automatically as you leisurely draw your pictures. Running a pre-recorded ARexx script gets RPaint to re-create your picture at a lightning speed. Alternatively, you can directly control RPaint via ARexx through your own program or any other ARexx compatible program, such as CanDo or Scala.

The theory side is excellent, but how does RPaint perform in practice? Not very well is the answer. The drawing side is almost pathetic. All drawing functions are accessed from pull down menus which makes it annoying if you keep wanting to change from one tool to another. This should be speeded up by the use of keyboard shortcuts, but the object of this is defeated by implementing what



Charting the Amiga dimension on RPaint.

seem to me somewhat absurd short cuts. "Amiga 2", for example, gives you a freehand drawing tool, "Amiga 5" for rectangles and "Amiga 8" to cut a brush. This appears rather a clumsy way to go about it, if, like me, you are used to employing DPaint's (more understandable) style of "r" for rectangles and "b" to cut a brush etc.

Forgetting the drawing side and looking at the ARexx tools, RPaint has a lot to offer if you need an easy way to create graphics and text on the fly under ARexx control. Animated bar charts are an ideal application and you

can pass variables over to RPaint too. The final feature worth mentioning is the screen size which can go up to 16320 by 16440 pixels! RPaint can be made to scroll the screen which extends its use further.

### conclusion

The version I was given for review was an ECS version which doesn't support any AGA screen modes at all. So, 32 colours in hi-res is out of the question and so too are any HAM modes. My very last gripe is that the freehand tool doesn't play back properly when it's been recorded into an ARexx script. In conclusion, RPaint will only interest those with an application in mind for a "remote control" paint program, but if you are among them then it probably has some unique advantages for you to consider.

### Ratings: Out of 10

FEATURES	0 2 4 6 8 10
EASE OF USE	0 2 4 6 8 10
SPEED	0 2 4 6 8 10
PERFORMANCE	0 2 4 6 8 10
DOCUMENTATION	0 2 4 6 8 10
VALUE FOR MONEY	0 2 4 6 8 10

### OVERALL RATING



### INFO

ETBA  
Contact: MegageM  
1303 Adria, Santa Maria, CA 93454  
Tel: 805 349 1104

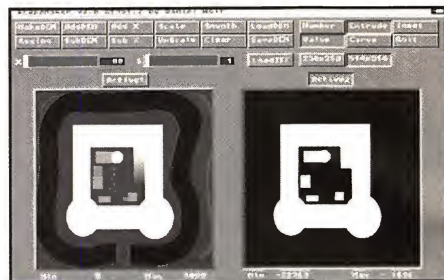
# Landscape Maker

**As any deity knows, you really need full control during landscape creation. Gary Fenton tries out a program that lets you play God.**

**S**capeMaker 3 is a simple to use program which converts IFF images to Vista DEM landscapes. DEM files can be read by VistaPro which will render the files as fractal landscapes.

An original IFF image can be created in almost any paint package. ScapeMaker then extrudes your images using either Number mode (the first colour in the palette has a low altitude and the last colour has the highest altitude), or Value mode (dark colours represent low areas while brighter colours are used for high altitudes). What you are drawing is effectively an altitude map.

Before conversion, you can use a selection of optional effects. Your landscapes can be scaled, smoothed, cropped, or merged from within ScapeMaker. However, the program can only load IFF images that were created

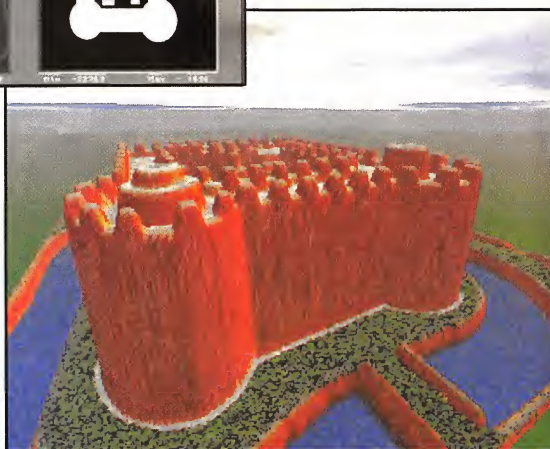


The screen where all the work is done.

using original chip set or ECS modes, excluding EHB and super hires. AGA images are as yet out of bounds. But MegageM do frequent upgrades so that should come along.

### conclusion

ScapeMaker certainly doesn't provide any thrills but it does its job very well. With a bit of thought you can actually



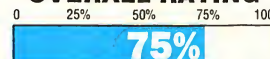
Castles in the air or on the screen - ScapeMaker allows the creation of dream homes.

create some very interesting landscapes or indeed a castle as I have!

### Ratings: Out of 10

FEATURES	0 2 4 6 8 10
EASE OF USE	0 2 4 6 8 10
SPEED	0 2 4 6 8 10
PERFORMANCE	0 2 4 6 8 10
DOCUMENTATION	0 2 4 6 8 10
VALUE FOR MONEY	0 2 4 6 8 10

### OVERALL RATING



### INFO

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## 24-PIN £169

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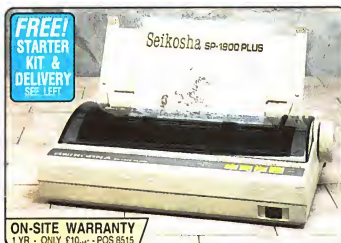
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- Seikosha SP-1900 Plus
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- 80 Column
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- 1K Printer Buffer + 2 Fonts
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- Epson and IBM Emulation (Windows compatible using Epson/HP drivers included as standard in Windows 3.1.)
- Automatic Sheet Feeder Option
- Auto Paper Load, Paper Parking
- FREE Silica Printer Starter Kit

PRINTER RRP ..... £149  
STARTER KIT ..... £25  
TOTAL VALUE: £174  
SAVING: £65  
SILICA PRICE: £109  
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- Seikosha SP-2400
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- 80 Column
- 300cps SD, 240cps D, 60cps NLQ
- 21K Printer Buffer + 5 Fonts
- Parallel and Serial Interfaces
- Graphics Resolution: 240 x 144dpi
- Epson and IBM Emulation (Windows compatible using Epson/HP drivers included as standard in Windows 3.1.)
- Optional Auto Sheet Feeder Unit
- FREE Silica Printer Starter Kit (Wide Carriage Model Available SP-2415 - £219 + VAT = £257.33 PRI 8215)

PRINTER RRP ..... £185  
STARTER KIT ..... £25  
TOTAL VALUE: £210  
SAVING: £71  
SILICA PRICE: £139  
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+ VAT = £163.33 PRI 8204

### 24-PIN 80 COLUMN 240CPS



- Seikosha SL-90 Plus
- 24-Pin Dot Matrix
- 80 Column
- 240cps SD, 192cps D, 84cps LQ
- 20K Buffer + 9 Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson LQ850 Emulation
- Windows Driver as Standard
- Semi-Automatic Sheet Feeder, Paper Parking, Optional Automatic CSF
- FREE Silica Printer Starter Kit

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STARTER KIT ..... £25  
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SAVING: £75  
SILICA PRICE: £139  
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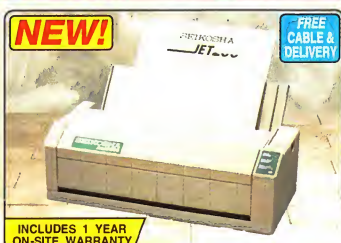
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- 2 Scalable Fonts + 8 Bitmap Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360 dpi
- Epson LQ870 Emulation with Colour Function
- Colour Printing as Standard (Includes Colour Ribbon - Black Ribbon Optional Extra)
- Friction Feed/ Push Tractor
- Optional Automatic Cut Sheet Feeder
- FREE Silica Printer Starter Kit

PRINTER RRP ..... £249  
STARTER KIT ..... £25  
TOTAL VALUE: £274  
SAVING: £105  
SILICA PRICE: £169  
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### 180CPS INKJET



- SpeedJET 200 - Inkjet Printer
- 50 Nozzle Inkjet Head
- 180 CPS Draft, 120 CPS LQ (10cpi)
- Print Through 2.67 Pages Per Minute
- 128K Printer Buffer - 3 Built-In Fonts
- 1 x IC Card Slot for Buffer Expansion/Fonts
- Parallel Interface - Graphic Resolution 300 x 300dpi
- HP Deskjet Plus Emulation (PCL3+)
- Windows Driver Standard
- Semi Automatic Single Sheet Feeder
- Optional Automatic Sheet Feeder - 70 Sheets (£35 + VAT)
- Ultra-Quiet - Less Than 45 dB/A

PRINTER RRP ..... £235  
TOTAL VALUE: £235  
SAVING: £56  
SILICA PRICE: £179  
**£179**  
+ VAT = £210.33 PRI 8022

### 300CPS INKJET



- SpeedJET 300 - Inkjet Printer
- High Capacity 128 Nozzle Head
- 24K Printer Buffer - 3 Built-In Fonts
- Large Ink Tank - up to 4.2 Million Characters
- 300 CPS Draft (10cpi) - 300 CPS LQ (10cpi)
- 80% Faster Than Most of the Competition
- 2 IC Card Slots for Buffer Expansion + Fonts
- Parallel Interface - Graphics Res. 300 x 300dpi
- HP Deskjet Emulation PCL3 - (Windows compatible using Epson/HP drivers included as standard in Windows 3.1.)
- Built-in Automatic Sheet Feeder - 100 Sheets
- Economical to Run - only 1.3p per page
- Ultra Quiet - 46dB(A) Maximum

PRINTER RRP ..... £359  
TOTAL VALUE: £359  
SAVING: £110  
SILICA PRICE: £249  
**£249**  
+ VAT = £292.58 PRI 8030

### 4PPM LASER



- OP-104 - 4 Pages per minute
- HP LaserJet IIIP™ Emulation (Windows compatible using Epson/HP drivers inc. as standard in Windows 3.1.)
- Resolution: 300x300dpi - 14 Fonts
- Uses Original HP® Font Cards
- Postscript Emulation Option (Extra)
- Optional IBM, Epson & Diablo Emulation Cartridges
- Centronics Parallel & RS232C/RS422 Serial Interfaces
- 512K RAM - expandable to 2.5Mb
- Flexible paper handling: Standard paper cassette - 100 sheets, Optional 2nd bin - 300 sheets
- Cable required: CAB 7500 for PC - £9.95 or CAB 7614 for ST/Amiga - £12.95

PRINTER RRP ..... £899  
TOTAL VALUE: £899  
SAVING: £480  
SILICA PRICE: £419  
**£419**  
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### THE SILICA SERVICE

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and accessories, or help and advice. And, will the company you buy from contact you with details of new products? At Silica, we ensure that you will have nothing to worry about. With our unrivalled experience and expertise, we can meet our customers' requirements with an understanding which is second to none. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Service".

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# test drive

# Yes... CanDo

**The popular programming**

**package for novices and**

**experts has been updated.**

**Gary Fenton finds out how it's**

**been improved.**

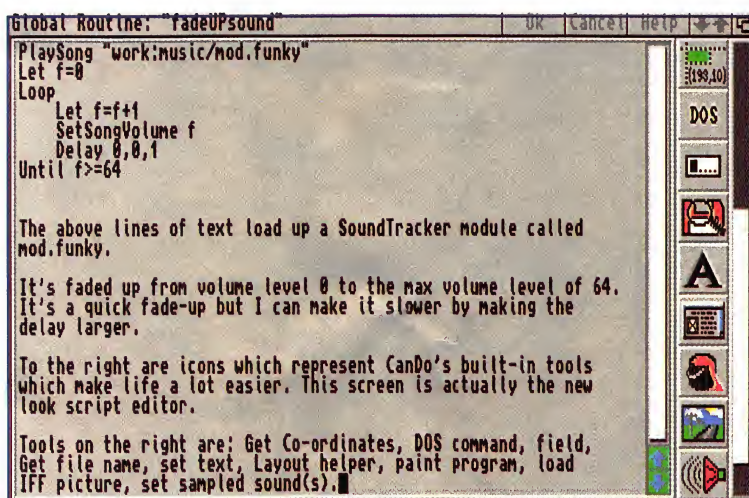
**V**ersion 2.51 of CanDo features 21 new commands, variables and functions compared to version 2.0 of the software. The biggest change is the inclusion of AGA screen modes.

All screen modes are catered for, from 2 colours 320 by 256 up to HAM8 super high resolutions with interlace. Although there are controls for overscan screens, I can't get any further than Text overscan. When I select Max overscan on a non-interlaced screen, CanDo doubles the resolution! It beats me!

## sounds

By popular demand, CanDo now plays MED and SoundTracker type music modules. Using "SONG <options>" you can pause the music and continue playing later on, increase and decrease the tempo and play the next or previous song in a list.

SETSONGVOLUME will change the volume of the currently playing song allowing you to fade the music. Sound sample control has two new commands which let you alter the period and volume of the currently playing sample. This gives some very interesting results.



CanDo's ability to allow you control your programs.

## askfor more!

AskFor functions let you add requester windows, ASL file requesters, and Amiga Guide help

## MultiMedia

About two months ago I was asked to create an interactive football disc to run on CD32. I only had two weeks to complete a demo disc so programming in C or assembler

**Selecting YES returns 1, NO returns 2, and**

**MAYBE returns 3. You can have as many options**

**as you can fit onto the screen.**

Options Requester

I'm going to format your hard disk (HD1). What do you say?

Okay

No Way!

Let me think about it

ABORT!

**The Requester: Easy to program and even easier to use.**

A example of the Options requester.

files. Creating a requester window is incredibly easy.

Let x=AskForResponse ("Are you going on holiday?", "Requester title", "Yes!No!Maybe"). This line creates a requester which asks

"Are you going on holiday?", and displays three possible answers for the user to click on. Selecting YES returns 1, NO returns 2, and MAYBE returns 3. You can have as many options as you can fit onto the screen.

## commands

There are two new printing commands which use your currently selected printer preferences. PrintScreen prints the current screen and PrintWindow prints the current window, or area of the window.

Two new Insert commands will type in to the current document either the "BufferList" or "PubScreenList" (CanDo now supports public screens!).

Another new document command is FilterDocument which tests each line against a given pattern. The line which don't fit the pattern are deleted. Clever stuff.

## what CanDo can do

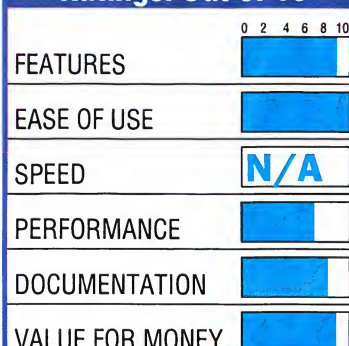
CanDo is a programming package with a major difference. Instead of typing in line after line of code, CanDo gives you a neat GUI (graphical user interface) with a tempered barrage of buttons to click on.

Simple programs can be created from within CanDo just by clicking on a series of buttons. Your program can include buttons of your own and fields, windows, animations, music and sound effects. With a certain amount of typing you can create very complex programs such as databases, paint programs, games, Workbench applications and anything else you can think of.

Any typing you do to program CanDo is quite simple and looks a little like BASIC. Included is a built-in paint program which can be used to create screens from scratch or to add extra graphics to the current screen. It also features excellent animbrush control which lets you define a path for the animation to follow around the screen.

Unlike AMOS, CanDo is 100% Intuition and AmigaDOS friendly and multitasks just like any normal Workbench program. Although CanDo is very slow if you plan to write action games, it's a fantastic tool for easily creating application software.

## Ratings: Out of 10



## OVERALL RATING



## INFO

Price: £99 (Upgrades: £60 from v1.5, £20 from v2.x)

Contact: Inovatronics UK

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# THINK

## An **AUI** Special Feature

Alex Standish Leads the **AUI** Special  
Gutenberg Project Team To Dig Out  
Everything You Need to Know to About  
Printers and How to Make Your Print  
Outs Look Simply Amazing.





# PRINT



When it was prophesied that as offices went electronic they would become paperless, the pundits forgot the human need to hold something in your hand, run your eyes over it, carry it about even take it to the loo - to read not to use.

Typewriters had hardly penetrated the home market when their keyboards were transferred to computers and suddenly printing out your letters perfectly without all that whiting out of mistakes; moving text about even changing tpestyles, became a real possibility to millions of computer users.

But when machines like the Amiga which offered quality and speed came along, printers were still expensive and in most cases big, clumsy and not very efficient. And the software has improved. Over the last few years, cheaper and better word processors and DTP programs have given us all the chance to make professional looking print outs - if we could afford the machine to put those nicely designed words onto paper.

Now for printers, like computers, prices are falling fast. Professional level technologies such as ink jet are coming in at lower and lower costs and all at once printing which was only available to us at entry levels like 9 pin is now moving up to really excellent standards on machines we can not only dream about but actually afford to buy.

In this *AUI* Special Feature, we are examining the different options you have, explaining what to look out for now if you are buying your first or upgrading your present printer; giving you some tips on getting the most out of a printer and even suggesting some best buys. We hope it will make the not always easy world of print just a little more manageable and give you that much more confidence to Think Print.

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*Big sellers and those who make them.* **PAGE 67**

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### CONCLUSIONS

*The best printers - price and performance.* **PAGE 78**



# THINK PRINT

## 7 THINGS TO CONSIDER BEFORE BUYING A PRINTER

Before choosing a printer, there are seven important questions which will help you in your choice of getting the most effective printer..

### 1 Quality

What standard of quality do you need? Be honest with yourself about the quality you really require, it could save you hundreds of pounds!

### 4 Noise

If you're using your printer in a home environment, in a room where people are listening to radio or watching TV etc, printer noise could prove to be a major handicap.

pictures that their AA chipsets make possible. With a 9-pin printer you may be disappointed with the printed results compared to what you see on screen.

### 2 Speed

Is a fast printer important to you? If your time is money the seconds or minutes it takes to print a document will be of immediate interest.

### 5 Price

Buying the cheapest printer available may seem like a smart idea, but what are your longer term needs? Will you want better quality, colour etc in future? Printers can't be upgraded, if you decide you need a better printer you'll have wasted your initial expenditure.

### 7 Amiga Printer Drivers

Most printers reviewed here come with dedicated Amiga printer drivers. If the one you're considering buying doesn't - think carefully. Unless it supports one of the more common printer emulation's (Epson, PCL, Postscript, HP LaserJet etc) you may have a tough time getting it output correctly.

### 3 Colour

The Amiga offers unrivalled colour graphics and text handling facilities, do you want to take advantage of these facilities? It's a black and white decision!

### 6 Resolution

If you're the proud owner of an A1200 or A4000 you'll almost certainly want to print out the high resolution



After monitors one of the most useful peripherals you can add to your Amiga is a printer. If you're considering buying one for the first time **AUI** here presents the definitive guide to Amiga printers. But if you already have a printer you'll probably still find this guide of interest. Maybe you're considering upgrading? Do you really understand how your printer works? Are you really taking

advantage of your investment? Over the next 6 pages we reveal, we hope, everything you could want to know about printers, unless you work for a printer manufacturer you'll find something of interest. Even if you work for a manufacturer you should read this, and find out how your particular brand compares - are you working for the right company?

## Print in Good Company

In this round up of printers we examine not just ten of the most popular printers for the Amiga, but also investigate the technologies behind them, identify which models give the best quality printing and which offer the best value for your hard earned readies. In short, probably everything you need to know before buying a printer and parting with your money.

### Star

Star was founded almost 50 years ago in 1947, and was originally established as a precision engineering company. Now Star is one of the leading manufacturers of printers, producing some two million units a year, the majority of which are dot matrix. They manufacture printers in the UK, and are the only printer company in this round up to offer on-site warranty with their models. Today their LC range is one of the best selling ranges, encompassing two very popular nine pin models and no less than five 24 pin variants. In this round up we examine three of them, their popular colour nine pin the LC100, the black and white 24 pin, the LC24-100 and the 24 pin colour LC24-20.

### Seikosha

Seikosha is part of the huge Seiko group, a company with a turnover of £6billion and some 18,000 staff. Strangely enough Epson is also tied in associated with Seiko, in one of those strange multinational Far Eastern associations that no one this side of Tokyo can understand. Seikosha themselves have been making printers since 1973 and thanks to some aggressive price points frequently come up with some best sellers. Their SP1900 with a street price just creeping over £100 is particularly popular, and gets the full treatment in the review as does their new colour printer the SL-96.

### Panasonic

Panasonic is a name that doesn't really need an introduction. Part of the massive (with a capital m) Matsushita Electric Industrial Company of Japan, Panasonic makes everything from CD players to car radio's to printers. Panasonic has recently been in the limelight as one of the key movers behind the 3DO games console. Here we look at their new and popular KX-P 2023 and KX-P 1170 models.

### Citizen

With a name like Citizen you won't be surprised to find that this printer manufacturer is the same company that makes watches. Whether this is a good or bad thing depends upon your view of their watches, but either way Citizen have a name to be proud of when it comes to quality printers. Like Star they manufacturer their models in the UK, and in contrast to Star's 12 months on-site warranty, Citizen offer a 2 year return to base warranty. Personally I prefer a longer warranty to a shorter but more convenient on-site arrangement, but you may differ. Citizen are one of the more technologically astute manufacturers covered in this review. If a new technology is announced you can be sure Citizen will have a printer that features it shipping pretty quick.

### Ricoh

A name that burst on to the Amiga last year, Ricoh introduced just one model - the LP1200 laser printer. This new printer offered superior resolutions of 400dpi, fast print speeds, 2Mb of RAM as standard, the ability to upgrade its firmware and all for a price of just £699! Recently the LP1200 has fallen in price to £599 and now comes with a pretty good Amiga printer driver.

### Canon

A name long associated with bubble jet and laser printer technologies. Canon also have a reputation for colour photocopyers (great for running off the odd fiver when you're short!). Many laser printers available today are based around Cannon engines (ie the internals of the laser printer) and as such they have built up a fine

reputation for producing solid, reliable printers. Although old the Cannon BJ10ex which we look at here is still a very popular ink jet printer - especially given the low prices its now available for.

### Hewlett Packard

You can't mention laser printers without mentioning HP. HP are not only one of the worlds leading printer manufactures, regularly raising the stakes by which such printers are judged, they are also the company behind the page description language PCL, the only real rival to the industry standard Postscript. HP Deskjet printers are some of the best ink jet printer around and here we examine the DJ 510 and DJ 550C, both favourite models.

#### The following lists the actual printers reviewed by type

9-pin  
Seikosha SP1900+  
Panasonic KX-P 1170

9-pin Colour  
Citizen Swift 9X  
Star LC-100

24-pin Black and White  
Panasonic KX-P 2023  
Star LC-24-20-II  
Star LC-24-100

24-pin Colour  
Seikosha SL-96  
Citizen 224

Ink Jets  
Cannon BJ-10ex  
HP Deskjet 510  
HP Deskjet 550C

Laser Printers  
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## technology



When choosing a printer one of the most important considerations is which type of printer you should buy. By type of printer we refer to the basic technology employed to get ink to the page. There are three types and the type determines price, quality and speed.

The lowest cost printers are called dot matrix. These are the most common type of printer found in the Amiga market and are also the oldest technology of printer. With a dot matrix printer you can print all types of text and graphic, in both colour and black and white, and the paper used can be multi-part and continuous, ideal for business stationary such as invoices etc. However it's not all good news. Printers of this type offer the poorest quality of printing and are the noisiest.

Dot matrix printers, like most things in the computer industry, are named after the technology behind them. In their case they work by physically punching the shape of each letter (made up of a dot matrix of pins) against an ink ribbon which in turn is pushed against the paper, making an impression on the paper. The more dots the higher the quality as the printer can form characters with more detail. At least this is true up to a point. Unfortunately because characters are made from pins being pushed into a ribbon, interference between pins (as ink spreads) reduces clarity and results in poorer results. This makes it impractical to have dot matrix printers with high resolutions, to get high resolutions without these problems would increase their price above that of competing technologies.

Dot matrix printers started with 9 pins, 18, 24 and 48 pin versions have also all been developed. Today however, these have whittled down to just 9 and 24 pin variants.

As a side line in the not to distant past there was a similar technology called Daisy Wheel printing. This concept was based upon having all the printable characters available, pre-formed, on a wheel, this wheel was rotated to select the required character and then punched against a ribbon. Being pre-formed the print quality from this type was superior to dot matrix technology. However, with the rise of graphics, different

fonts and scalpel typefaces it became impractical, if not impossible, to store all the possible

variations on a wheel and daisy wheel printers gradually disappeared.

Now days, dot matrix printers are the cheapest and most flexible printing technology available to the Amiga user.

Closely approaching dot matrix printers for price are ink jet models.

These printers work in a similar manner, with characters being formed from a matrix of dots, although the ink is squirted on to the paper rather than being punched. By using sophisticated technology ink jet printers are able to keep the size of the individual dot squirts down to ridiculous sizes, which in turn means higher resolutions and thus better quality. They have several advantages over dot matrix printers, apart from quality, these being a very reliable technology and quiet noise levels.

Ink jet printers have taken approaching 10 years to become common place, and are now encroaching upon dot matrix

printers for the hearts and minds of users.

The last type of printer, and coincidentally the most expensive is laser technology. These offer by far the best quality of print available, so good in fact that an Apple laser printer (in conjunction with a software title) started an entire new growth area for computers - that of desktop publishing - allowing users to produce brochures of a quality good enough to be used instead of professionally printed documents.

Laser printers are also very fast, producing entire pages at once, rather than the single lines that dot matrix and ink jet models can produce.

## EASY ACCESS

**If you're new to printers you'll already have come up against a seemingly impenetrable wall of gobbledygook. Here is brief guide to the jargon the experts apparently can't live without.**

**CPS:** Abbreviation standing for Characters Per Second. A reasonable indicator to the speed of the printer. The more characters the printer can print in a second the faster it is. The higher this figure the better. CPS is also only relevant to dot matrix printers, ink jet and laser based models work on entire pages at once.

**Dot Matrix:** Describes one particular type of printing technology - also see lasers and ink jet. Dot matrix defines the process that forms the characters to be printed using this technology - for more information see 'PRINTECH' Page nnn.

**DPI:** Printers work by depositing small dots of ink on the paper, by arranging the dots in patterns and shapes you can recreate any character, letter, number or graphic image. The more dots you can cram into an area the more sharply defined and clearer will be the print out. DPI specifies how many Dots there are Per Inch. The higher the number, the better.

**Epson Compatible:** When your Amiga sends text etc to the printer it must tell it where to print, the style in which to print, which font to use etc. Epson, by virtue of selling more printers than any other manufacturer, set the standard method of doing this. The majority of software available today can correctly control any printer which supports Epson's control system. Hence most printers offer Epson compatibility.

**Fonts:** To speed up printing, most printers have the shapes of several or more type faces (fonts)

stored in their memory. The computer need then only say 'print this text in this font' rather than describing the shape of each letter. Most printers have several fonts built-in.

**HP-GL:** See Page Description Languages.

**Ink Jet Printers:** Now the second most common type of printing technology used by printer manufacturers - see dot matrix and laser printers. Ink Jet models work by squirting ink at the page. See 'PRINTECH' Page nnn.

**Interface:** Printers are external peripherals, to be used they must be attached to your Amiga. Surprisingly, this is not done by a piece of string! Instead one of two types of 'interface' are used. The interface specifies the physical characteristics of the connection, the type of plug/socket used etc, and so how data is transferred between the printer and the Amiga. To be used with an Amiga look for printers that have a Centronics (also known as Parallel) or RS232 interface.

**Laser Printer:** Laser printers are another, more recent printing technology (see Dot Matrix and Ink Jet). Laser printers use techniques very similar to photocopies to give very high quality, very fast printing. They are also the most expensive type of printer. See 'PRINTECH' Page nnn.

### PAGE DESCRIPTION

**LANGUAGES:** With laser printers entire pages are printed at once. Rather than send the position of every dot on the page (and as laser printers print 300 dots for every inch that's a lot of information!) to the printer, special

languages have been developed which allow the computer to tell the printer what to print on the page, shapes, size, fill type etc and the printer does the hard work of figuring out where the individual dots should go. This allows the computer to finish sending the data much quicker and lets you get on with your work.

A typical example would be the computer saying (in its lingo, of course) draw a square, two inches wide, half way down the page and fill it with light grey and the printer would calculate what and where actually to put on the page. POSTSCRIPT, PCL 5 and HP-GL/2 are such languages.

**PCL:** See Page Description Languages.

**PINS:** Dot matrix printers work by pressing pins into an inked ribbon which is in turn pressed against paper, thus making an impression. The more pins available, the greater definition a character has, and so better quality. Dot matrix printers are defined by the number of pins they have. The two most common being 9 and 24 pins.

**POSTSCRIPT:** See Page Description Languages.

**PRINTER BUFFER:** When you print out, the information and data that tell the printer what to print are transferred from the Amiga to the printer's memory - held in the printer buffer. Until all the data has been transferred from the Amiga's memory to the printer buffer the Amiga can not resume what it was doing before it started printing. The bigger the buffer a printer has the quicker your Amiga will return control to you.



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◀ CONTINUED FROM PAGE 70

## Seikosha SP1900

One of the most popular printers available for the Amiga, the SP1900+ has proved a tried and trusted printer for thousands of users and at a price that's hard to beat.

In tests it gave reasonable although not brilliant quality output, but scored well given its low price. In terms of speed it's respectable producing 192 cps in draft mode, which is not really being fast enough for offices but more than adequate for home use. Noise levels may prove distracting in a quiet environment.

It's design is functional and easy to maintain, although a little flimsy in places. All in all it's a good printer for the home, and great value for money, although not suitable for a business.

## Seikosha SL-96

This is a new model and initial reactions were very favourable. Some time ago, Seikosha released the SP1900 and got most details right ensuring success for their small 9-pin. Seikosha's new model looks like doing the same all over again, but this time in the 24-pin



colour market.

Although not outstanding in any particular area, the SL-96 delivers across the board good performance without compromising. Its colours were a little bland at times, but nothing serious, and may have been the result of using the printer too much during tests.

A good speed of 240cps, resolution of 360x360, 10 built-in fonts, and a 42k buffer made this a strong contender for over all best printer.

## Cannon BJ-10ex

A perennial favourite, the BJ-10ex is a sturdy, tough and smart ink jet and one of the most popular.

With a resolution of 360 x 360 its quality is technically superior to that of most low priced laser printers, which can only cater for resolutions of 300dpi. However, the ink jet printing system is not quite as clean as laser technology, and typical prints from the BJ-10ex can appear slightly blurred, as stay ink dots congregate around the characters. Having said that, the quality is still superb for the price.



## Hewlett Packard Deskjet 510

A fine example of how ink jet technology has progressed. The 510 delivers very high quality black and white output at a price not to be sniffed at.

Its paper handling system was smooth and presented no problems, whilst users controls were easy and hassle free.



Hewlett Packard Deskjet 510



Hewlett Packard Deskjet 550C

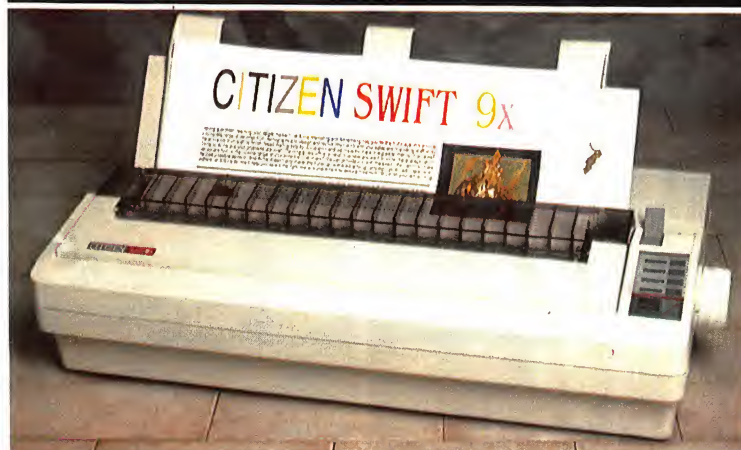
## Hewlett Packard Deskjet 550C

The big brother HP colour printer. In tests the 550C was very fast, much faster than any other ink jet reviewed, and the quality of its output was simply staggering.

Following the HP style the 550C has a smart, business like design, which won't look out of place at home. Like the 510 it has an elegant paper feed system and trouble free control system.

Although expensive for Amiga users (although not given its specification) the 550C is a printer well worth the money.

## Citizen Swift 9X



A strong all round 9-pin contender, with good scores in all areas. Quality wise the 9X delivers good quality colour and black/white printers, and offers very good quality printing for its price.

True to Citizen style the Swift 9X is very well built, nicely styled and very functional with an easy to use, clearly thought control panel, paper loading system and feeding mechanisms.

For specifications it is well endowed, with an 8K printer buffer, 3 fonts built-in, and resolutions of 240 x 216. For speed this beast runs fast doing 192cps in draft mode. Our own tests revealed it to be very fast, although like the other Citizen printers, the Citizen driver improved this still further.

CONTINUED ON PAGE 71





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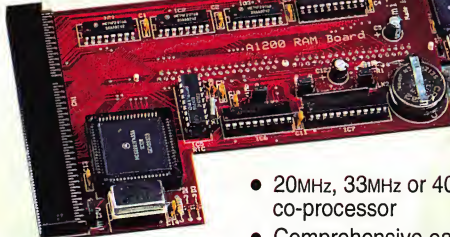
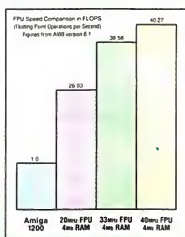
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**Colour me Canon, says**

**Alan Puzey, test driving a machine that makes your printouts works of art.**

**T**he Canon comes in an attractive grey colour that matches well with the Amiga itself, with a footprint of just 16 x 9 inches. The top and front cover of the printer may be swung up and the innards revealed. This is essential for the changing of inks. Swinging up this lid also reveals a set of twelve dip switches. For colour printing with the Amiga, I found dip switches 1, 5 and 12 on were ideal.

On the top of the machine are a number of LEDs and five control buttons. These are used to set the kind of printing, the thickness of paper and jet head cleaning.

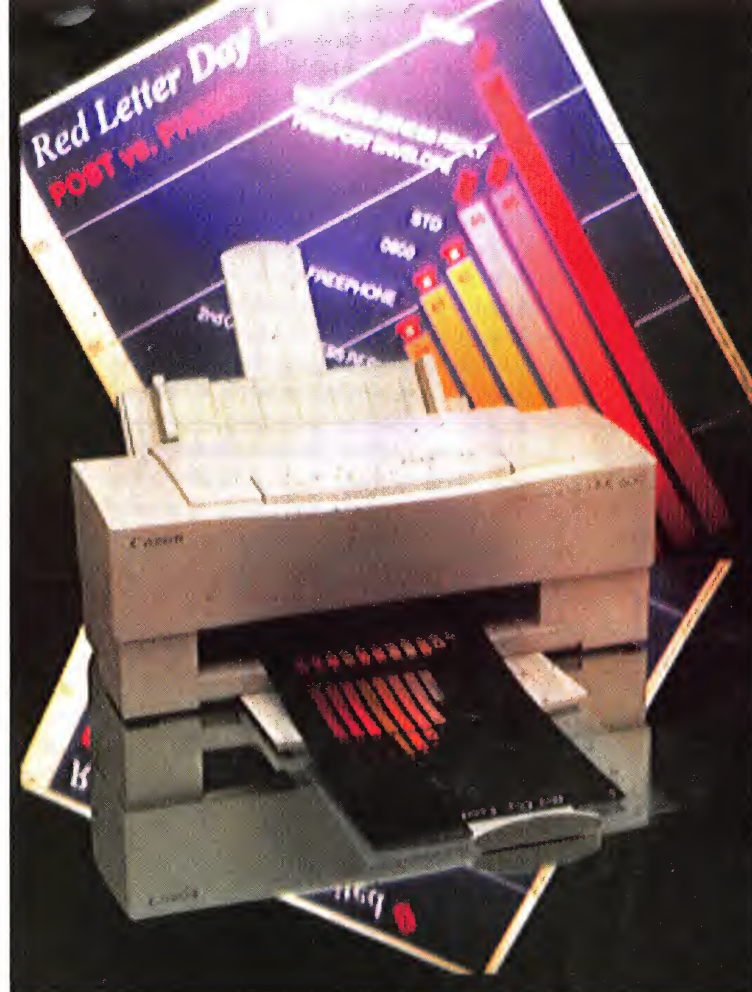
Up to one hundred sheets of paper, or ten envelopes, may be stacked in the delivery section at the back of the printer or sheets may be fed through singly. Continuous paper can't be used.

You may have to install the print head unit but this is an easy operation, well covered in the manual. The ink cartridges - cyan, yellow, magenta and black - are in the head unit and these are easy

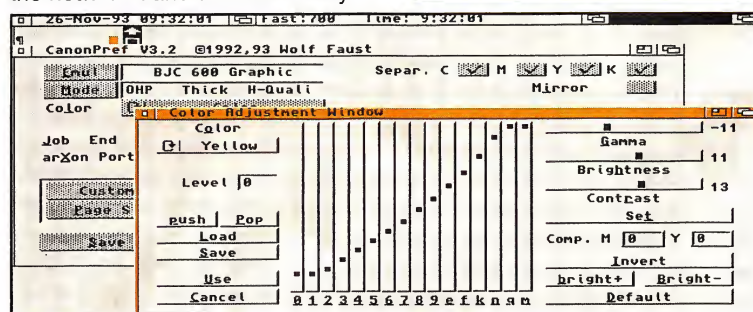
strips before being able to make the right decisions.

After a fortnight's work and around a hundred tests, I'm now turning out pretty fine pictures but I'm still working towards the supreme quality of the print-out examples that arrived with the printer.

If you install Canon Studio on a hard-drive, all subsequent printing parameters are set from within the Canon Prefs program. Though you can use this with the printer output panel of Brilliance or Deluxe Paint - in which case Canon Prefs overrules most of the Paint program's printer choices - you may decide to use Canon Studio. This enables you to print from any picture file without going into a paint program.



## Bubblejet 600



The 'infinite' adjustments for colour control.

to replace when empty. This is a much better system than used by some printers, where the whole print head unit is replaced when ink runs out.

Three automatic sample/test sheets show you the range of print colours, the eight built-in fonts and how to speak some French and German!

### studio

Shipped with the BJC 600 comes the well-known printing package, "Canon Studio" (reviewed AUI January 1994). It is capable of brilliant things, but there are so many permutations that to get the very best results, you must persevere and make plenty of test

### results

You will immediately notice the crispness of the 360 x 360 dpi definition and the clarity of the colours. The most obvious colour discrepancy is blues on the screen image coming out as purple on print-outs. This is a common occurrence with colour printers and can be corrected within a paint program or using Studio's printer settings for single colours.

Depending on the complexity and size of the picture, I found that whole page colour print-outs took up to 45 minutes. Fast, it isn't, but that's the price of quality. I found Floyd-Steinberg the most pleasing dither pattern to use.

One anomaly I discovered was

that my best results were produced on plain paper, rather than on the '20p per sheet' recommended coated paper. But maybe with a few more weeks' work I will find just the right combination to get those really A1 results on the coated paper.

### conclusion

This is a top notch machine, capable, I would judge, of the highest quality around at this time. I really like its appearance too. Ink cartridge changing is a doddle and it's as simple to use as ABC. There is an excellent Canon technical hotline for users.

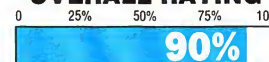
I also liked the relative lightness of the machine, the fact that the power cable was detachable and the accuracy and smooth operation of the paper delivery and reception.

The only drawbacks are those that can be applied to any of the current colour printers. It is quite expensive at £600 (this price is discounted in some stores) - but look at what you get for your money. There is a lot of learning to be done with the Studio interface but it produces excellent results. I can't think of a more suitable colour printer on the market for the Amiga user than the Canon BJC 600. **a**

### Ratings: Out of 10

FEATURES	0 2 4 6 8 10
EASE OF USE	
SPEED	
PERFORMANCE	
DOCUMENTATION	
VALUE FOR MONEY	

### OVERALL RATING



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# test drive

**W**hen I heard we were getting a Primera in for review I was very excited. I had seen a sample picture and was duly impressed by its glossy colour printing. The printer itself is compact, well built, but rather heavy, weighing in at a hefty 15 lbs.

So how exactly does this technicolour marvel print? Well, do you remember the good old Okimate Wax Thermal Printer? It was the first colour printer for the Amiga and only cost about £150. It sold hundreds maybe even thousands. The Okimate used a similar system to the Primera. This was a ribbon that had wax coatings of different colours along its length. Heat was applied to the ribbon and the colours were transferred to the paper one at a time. This system generated good images for such a cheap printer but as the Okimate had to print a small strip at a time it also produced heavy banding which couldn't be avoided.

The Primera works with a similar system but instead of a small ribbon cartridge, it takes a nine inch wide roll. This is easy to install by first loading it into a ribbon cartridge.

Easy that is unless you load it upside down, in which case the ink will be

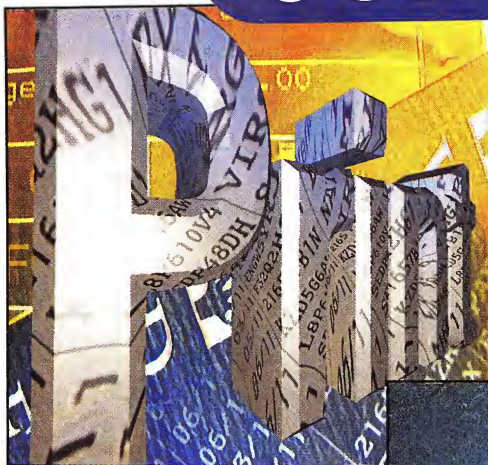


**Primera**  
COLOR PRINTER

The most inexpensive, most effective way to produce color output for your presentations and overheads. Whether you're creating charts, diagrams, pie charts or illustrations, the Primera prints in sharp, vibrant colors.

## COLOUR ME AMIGA

The Primera won't give you the blues - if you want purples.

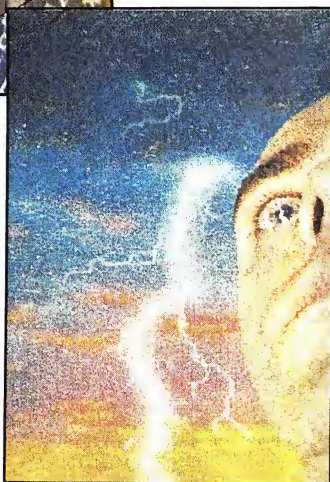


It's great to see your colour work in print

transferred onto the printing head, so be careful!

There are 3 types of ribbon available. A three colour version which contains Yellow, Magenta, and Cyan; a four colour version which adds an extra black layer, and a monochrome ribbon. The three colour ribbon will produce 115 prints and can use each of the colours to produce an "additive" black. As Cyan is laid down last, the print from this ribbon has a slight blue tint to it.

For a true black colour the four colour ribbon has to be used. The only drawback in this is that the Primera has to make one more pass to lay this colour down which uses up more ribbon. The compromise is that the 4 colour ribbon will only make 80 prints. The monochrome ribbon will produce 400 prints and is near laser quality, this is especially good for text. All the ribbons cost about £45.



The Primera cures technicolour headaches slowly but beautifully.

### Photo quality printouts from an Amiga? Just what

#### Gideon Overhead has always wanted.

To print 24 bit images I used the excellent TruePrint24 by ASDG. Printing these images took up a lot of processor time, in fact, it takes a A3000 3 minutes to prepare the image and a further 5 for the Primera to print it. When printing actually starts the Primera emits a groaning sound, not unlike that of a cat being strangled. Perhaps I should include sound in the ratings.

After the FX, the paper is then fed in and the colour yellow is printed to more FX, this time the sound of heavy grinding. When the yellow is complete, the paper is drawn in yet again. This is done for each of remaining colours.

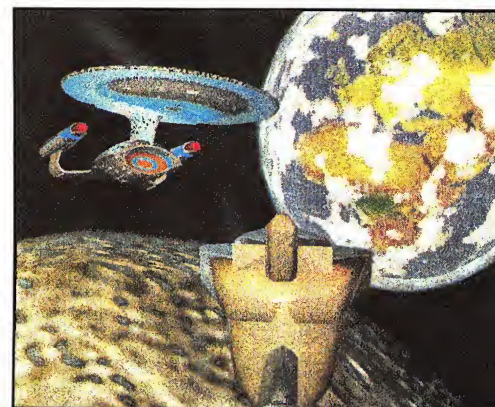
The quality of the printing does vary from picture to picture, and on the whole the images look far better on the screen. At 203 DPI this is nowhere near photographic quality but for the price it certainly is excellent, and I guarantee that no-one has seen better from the Amiga.

On very close inspection, the pictures are a little grainy and lack some detail but when held around 3 feet away they all look stunning. We did not try a photo enhancement process which is said to be

available but the pictures we printed out are better than anything we have seen on any other printer at even twice or three times the price. And you can print onto acetate cells which are supplied for use in overhead projectors.

though a pleasant one, for professional use its stunning images will be a huge success.

It used to be difficult explaining how good Amiga graphics are without having one with you. But no



Starship Enterprise flies into the Primera galaxy.

longer, you can now take prints of your favourite pictures down the pub and astonish all and sundry. Some day all printers will give this quality of colour reproduction but until then only the Primera - and the Amiga - will make it happen. **a**

Pictures created by Barry (3D) McCarthy.

### INFO

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### Ratings: Out of 10

	0	2	4	6	8	10
FEATURES						
EASE OF USE						
SPEED						
DOCUMENTATION						
VALUE FOR MONEY						
<b>OVERALL RATING</b>						
						<b>90%</b>

### driver

It is only recently that an Amiga printer driver has been written for the Primera. And we believe that this review is the first made using the Amiga. It is about time an Amiga driver arrived considering the amazing graphic advantages the Amiga has over the PC.

### conclusion

At £800 the Primera may seem a very expensive printer. But the price/value depends on what you are going to use it for. It would certainly appeal to anyone who works on the Amiga and would like hard copies of work, for example, to show clients. They are far better than colour photo copies and cost about the same. Though for home, the Primera could be a luxury,



◀ CONTINUED FROM PAGE 7



## Star LC-100

The 9-pin colour printer market is a crowded one, but the other manufacturers have had to make room for this model from Star.

Impressive specifications (180cps print speed in draft and 45cps in NLQ mode, 240 x 216

resolution, 8 fonts, and quiet mode) made this a printer to rival when launched.

In our trials the LC-100 lived up to its expectations, although print speed did fall slightly below what was quoted. Given its typical street price of around £150 the LC-100 is a great little printer for its money.



## Star LC-24-100

If you liked the sound of the LC-100, but wanted 24-pin quality, look no further, Star have a model for you.

This printer offers the same functionality as its kid brother (or sister), but has several improvements. These being a buffer size increased from 2Kb to 6Kb, print speeds up from 180cps to 192cps, two additional fonts, and of course a high resolution - 360 rather than 240.

Print quality wasn't quite as good as the LC-24-20-II (see below) but certainly equal to most other 24-pin printers reviewed here. All things considered this is a good, general purpose printer, just a shame it doesn't have a colour option.

## Star LC-24-20-II

This is the shooting Star (hah hah) of the Japanese firms collection. Racing along at 200cps (210 in fast mode), the LC-24-20-II is pretty fast. Although not as fast as some (the KP-P2023 from Panasonic for example) it is a fast 24 pin never the less.

A large buffer of 39Kb as standard with the option to upgrade to 71Kb

should you want it, ensure that this model will handle most jobs adequately and perhaps makes up for speed difference when compared to the KX-P2023, which only has a buffer of 14K!

Quality wise this Star shone through (can these jokes get worse!). Although it has a pretty standard resolution, Star seemed to work some magic, with the LC-24-20 output looking very sharp.

For business or home use this model is worth a look.

## Panasonic KX-P1170

The Panasonic 9-pin printer entry offers good, general quality and specifications. Speeds of 192cps, four fonts, resolutions of 240x216, and rugged design, although the other Panasonic printer reviewed here looked considerably better.



Like its relation, the KX-P1170 has a simple and easy to follow control panel which provides most of the facilities you could want. These controls (such as font/pitch selection and paper length) are accessed through a combination of four touch buttons providing relatively easy access.

Again, an all round average printer which would be ideal for any monochrome work carried out on your Amiga.

# The Tests

When we sat down to research this feature we didn't just want to do a review of printers, compare the output of a few models, print some outputs and tell you what we thought were the best. Nah, that's the easy peasy route, that's for cissies. Not us on AUI, we're big boys and when we do a review we don't take prisoners!

We sat down at a table, suitably equipped with liquid refreshments (hey we're journalists - it's one of hardships we have to endure) and analysed what you would want to know when deciding which printer to buy. What do you need to know? Then we ignored it, and came up with our own list!

Joking aside, we listed everything that will help you in making an intelligent buying decision. We looked at the technologies in use, their advantages (both of these are covered elsewhere in the feature) and which models give you the best quality, speed, noise levels and best performance.

A series of tests were then devised. The tests were carried out on an Amiga 1200, with a reference print sample created in ImageFX version 1.5. This featured colour bars, text at different point sizes, and bit map image. For speed tests the file was printed externally of any application using a custom written program which could use a given preferences printer driver, this circumvented any delays imposed by a particular application (created by possible pre-print processing). We also ported

the image to a 486dx PC, with 4Mb of RAM and printed it from there. This last test was done as a backup to check actual printer speed, and ensure that a particular manufacturers own printer driver was not hiding slow hardware.

Noise levels were checked use a sound analysis program running on a PC. This was done in a bare room, with the PC sampling the sound of the printer as it produced the test page. The microphone was positioned in three locations around the printer (in the same position for every model) and the level compared by the software.

The above tests were measured on a scale and weighted in terms of priority (quality, speed, noise level) with the score divided to the price. This gave an overall rating of the best printer. Other award classes include best quality in each hardware class, best budget, most technologically advanced.

## Panasonic KX-P2023

Panasonic's latest 24-pin model has a lot going for it. One of their "QuietPrinter" range, the KX-P2023 employs a lot of sound reduction hardware and although rated at 46.5 dB which is in theory louder than Citizen's 240C, it has a super quiet mode (in which it slows down) of 43.5 dB which puts directly in competition with Citizen's model. In our tests there was hardly anything to judge between them for noise levels.

The control panel is a simple but easy to follow affair and crams a

lot of features in to a small area.

Speed wise it was good, churning out 240 cps in draft, although our tests revealed it to be faster than Seikosha's 24-pin which is also a 240cps model. One factor very much in Seikosha's favour however is the buffer size. The KX-P has a buffer of just 14k, compare this to the 42K buffer of the SL-96!

All in all this model is a considerable improvement over previous models I've seen from Panasonic and signals a good future for the Panasonic brand.

Recommended - but check out the SL-96 before making a final decision.

## Citizen 224

Topping off the two Citizen models here is the 224. This is a quality 24-pin colour model that gained a lot of respect when tested out. Its smart design, easy and high technology LCD control panel made it nice to use, whilst quality output assured it a place in the finals.

In all areas the 224 scored highly, we'll be sorry to see this one go back.



CONTINUED ON PAGE 86 ▶



# CITIZEN PRINTERS

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### 24 PIN 270 CPS 80 COLUMN



- Citizen Swift 200/200C - 24 pin - 80 col
- 270cps SD (15cps), 216 cps Draft, 72cps LQ
- 8K Printer Buffer (40K max) + 7 LQ Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360 dpi
- Epson, IBM, & NEC P20 Emulations
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- Citizen 120D+ - 9 pin - 80 column
- 144cps Draft, 30cps NLQ
- 4K Printer Buffer + 2 Fonts
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The Citizen 120D printer comes supplied with a parallel interface as standard. If you require a serial interface instead, please state ref. PRI 2125 when placing your order with Silica.

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- Citizen ABC Printer
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- 8K Printer Buffer
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- Citizen Swift 240/240C - 24 pin - 80 column
- 300cps SD (15cps), 240 cps Draft, 80cps LQ
- 8K Printer Buffer - 40K maximum
- 9 LQ Fonts + 2 Scalable Fonts (8-40pts)
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- Parallel Interface
- Graphics Resolution: 360 x 360dpi
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- Colour Printing Standard - Swift 240C
- Colour Printing Optional - Swift 240
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TOTAL VALUE: £408  
SAVING: £199  
SILICA PRICE: £209  
+VAT=£245.58 - PRI 2571

### 9 PIN 240 CPS 80 COLUMN



- Citizen Swift 90 - 9 pin - 80 column
- 240cps SD (10cpi) 192cps Draft, 48cps NLQ
- 8K Printer Buffer
- 6 Fonts Built-in
- Parallel Interface
- Graphics Resolution: 240 x 216dpi
- Epson and IBM Emulation
- Auto Set Facility
- Ultra Quiet Mode - 45dB(A)
- Advanced Paper Handling
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- Colour Printing Optional - Swift 90
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TOTAL VALUE: £248  
SAVING: £119  
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**SWIFT 90C COLOUR**  
RRP: £219  
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SILICA PRICE: £139  
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### INKJET 180 CPS 80 COLUMN



- Citizen Project II Inkjet - 80 col
- 180cps Draft (10cpi), 120cps NLQ (10cpi)
- 50 Nozzle Head
- Whisper Quiet 46dB(A)
- 50K Printer Buffer
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## Ricoh LP1200

When unveiled last year the LP1200 created quite a stir, with its 400dpi resolution, fast print speeds, and 2Mb RAM as standard. Since then however the laser printer market has moved quickly. Lasers have fallen in price rapidly in the last couple of

months and HP's new 600dpi models although more expensive have taken some of the limelight off of Ricoh's 400dpi.

All things considered however the LP1200 is still one of the best laser printers available for Amiga owners. The quality of output from this model is simply superb. 400dpi may not sound a lot over 300dpi, but it does actually make a considerable difference. Even more so now that a dedicated Amiga printer driver is now available which can take advantage of this mode.

Speed wise the LP1200 is officially rated at 6ppm, but using a straight paper path and a risc based processor it actually achieves slightly faster speeds. In one graphic test we measured it clocking approaching 8ppm! A point of interest is Ricoh's page layout language, called 'LAYOUT'. This is a language which allows you to create forms etc tell the printer to create them in a special language of its own. Nothing special about this you say, Postscript and PCL have done this for years. Yes, true,

but the speed with which the LP1200 can print forms created in LAYOUT is simply stunning. In an example we saw running LAYOUT left both Postscript, PCL 5 and application created pages standing. It's a pity Amiga software vendors don't take advantage of this facility and provide LAYOUT compatible drivers!

Summing up this printer is easy, although expensive (for Amiga owners) it is by far one of the best lasers available in its price range and highly recommended.

## Printer Pointers

You may have decided which printer technology to go for, maybe even the actual printer, but before you go ahead and abuse your credit card you should check if it can be used with the Amiga.

Amiga software applications control printers in a pretty much standard way. This being that a particular application uses a control program, known as a printer driver, this is stored externally to the program. The Amiga operating system has a whole range of common printer 'drivers' supplied with it. Before you print you tell the Amiga which printer you have (choosing from a list of the drivers installed) and then whenever you print, each application loads the chosen driver and uses it to control the printer. With many of the printers reviewed here you will receive a disk which contains a new driver for correctly controlling and exploiting them. Citizen, Seikosha and Panasonic all have dedicated Amiga drivers available. With Citizen and Seikosha you get these drivers free from most dealers, with Panasonic you have to call a special Freephone number and an Amiga driver will be sent to you.

Although printers without a

dedicated Amiga driver will still probably still work, especially if they are compatible with one of the many printer drivers supplied as standard with the Amiga operating system, you should consider that you may not get the best out of them.

Assuming you've got a printer, have set it up correctly and have an appropriate driver installed what other problems or for that matter advantages should you be aware of?

Well, for starters if you are lucky enough to have a laser printer you should check that the driver being used is set to use the maximum possible resolution of the printer. Most low cost laser printers have a resolution of 300dpi, but some, notably the Ricoh LP1200 have 400dpi and some, ie the higher priced new HP range, support resolutions as high as 600dpi. Unless you have set the printer driver to use these higher resolutions you won't be using your printer to its full and will be wasting your money.

The same can also be said of colour printers. Just because you have a printer that can print in colour, it doesn't mean it will do so.

Unless the printer driver has been told to print in colour, and the application you are using supports colour, you'll have a black and white (possibly worse) output.

You should also be aware of margins. Whilst all the printers reviewed here print on A4 sized paper, it doesn't mean you can print to the entire width and height of the page. Many printers, particularly laser printers, have an area, typically half an inch, around the edge of the paper that they can't print on! This area is used to grip the paper as it makes its way through the mechanism and it is physically impossible to print in this area. If you're thinking of printing your own letter head consider this before spending your money!

Talking of paper, you should also check that the weight of the paper you intend to use presents no problems for the printer mechanism. Labels also can frighten the life out some printers - labels are as scary to a laser printer as mice are to Elephants - they go in, get stuck and don't come out! Whilst not a problem for most Amiga users, if you want to use heavier than 80gsm paper or labels check first!

## conclusions

Printing has come a long way in the last year. Where there used to be clear division lines in both quality and price between dot matrix, ink jet and lasers there is now a dirty smudge. Ink jets and the quality they bring with them are now appearing at under £200, whilst top of the range dot matrix models now rival ink jets for quality. Laser printers in the mean time are falling in price every day. But even after these considerations are taken into account there are still some clear winners.

The best overall printer in the Amiga market today is, by a clear margin, the Citizen 224. Good all round performance, great quality, high quality build and reasonable price make this a classic example of good engineering and sensible features.

The best budget model is another clear choice. The Seikosha SP1900 Plus at just £129 is great value for money. Reasonable performance and okay quality make this a good printer at a price to be remembered.

The vote for the most technologically advanced printer caused us some problems. Ink jets offer increasingly sophisticated technology, yet the Ricoh LP1200 employs some very novel concepts but the LP1200 is also getting on over a year old, so they couldn't really be defined as advanced anymore. In the end however, we opted for the LP1200. Although old, its upgradable firmware, flash ROM and high speed page layout language 'LAYOUT' continue to make the LP1200 an advanced printer.

Best Colour Printer, an award especially relevant on the Amiga given the power of its colour graphics capabilities goes to the Citizen 224. In terms of colour definition the 224 offers great output.

Special mentions go to the Hewlett Packard 550C for great quality, The and the Panasonic KX-P2023 for good all round performance.

## The Specs

Model	Price	Colour	Amiga Driver	Pins or type	Speed (draft)	Resolution (in dpi)	Buffer
Star LC100	£135	Y	Y	9 pin	180cps	240	8k
Star LC24-100	£169	N	Y	24 pin	192cps	360	8k
Star LC24-20	£199	N	Y	24 pin	210cps	360	8k
Seikosha SP1900	£128	N	Y	9 pin	192cps	144	1k
Seikosha SL-96	£198	Y	Y	24 pin	192cps	360	42k
Panasonic KX-PD2023	£220	N	Y	24 pin	160cps	360	14k
Panasonic KX-P1170	£120	N	Y	9 pin	160cps	240	6k
Citizen Swift 9X	£245	Y	Y	9 pin	192cps	240	8k
Citizen Swift 224	£240	Y	Y	24 pin	192cps	360	8k
Ricoh LP1200	£726	N	Y	laser	8ppm	400	2Mb
Cannon BJ10ex	£269	N	N	inkjet	110cps	360	37k
HP DJ510	£299	N	N	inkjet	3ppm	300	16k
HP DJ550C	£500	Y	N	inkjet	3ppm	300	80k



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- G-LOCK Genlock £284.00**

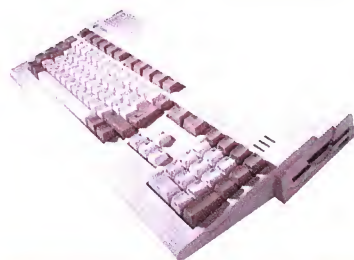
## A1200 Hard Drives

- Plugs into internal IDE expansion
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- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
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- Citizen**
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**Citizen Project £209.00**

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## THE SETTLERS

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OK, here is a puzzle for you to ponder on. What is the connection between a loaf of bread, a pig, and a lump of coal? Or have you heard the one about a loaf of old granite, a knight and a forest ranger? To complete the mix, how about putting 64,000 little people on the screen at the same time? The answers lie in a game that has reduced even the most cynical of software reviewers to a total state of open-eyed awe and the lack of sleep through constant playing and playing.

The Settlers is an awesome piece of programming that could only have been achieved by creative talent of the highest order.

So often good exciting ideas are ruined through poor or rushed coding with no real thought given to the player. Many times the grandiose plans just haven't worked because the size of the program highlighted limitations in computer processing speed.

Blue Byte over the last two years have lovingly crafted a masterpiece that has been well worth the wait. The user interface is a joy to behold, the graphics stunning, the manual, though hefty is refreshingly easy to read and the whole plan has been to enable you to enjoy the game at any level you choose to play it at.

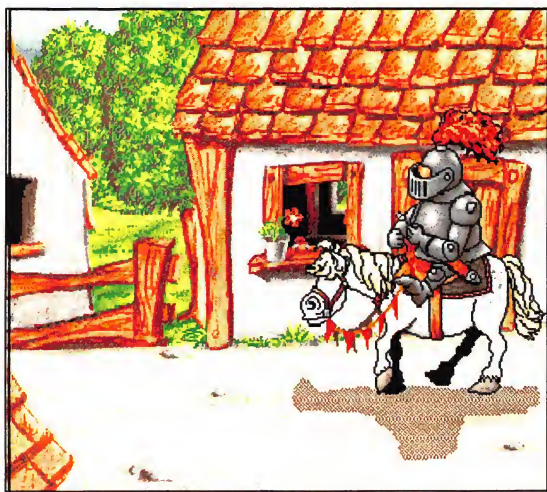
Forget all the other 'God' games, Populous et al, The Settlers has broken new programming ground and will be the benchmark in years to come for any up and coming software writer.

The game creates a brand new world for you within which you develop a township that not only has to thrive and expand but must be able to defend itself from attack and ultimately go out and become the sole surviving community in the land.

From a barren start, where all you have is miles and miles of mountains, valleys, deserts, fertile plains and lakes, you must choose the location most suited to your needs and plant your castle. The mountains provide a valuable source of mining riches like gold, iron and coal, the lakes give you fish to eat and offer an alternative mode of transport and the valleys offer

protection from attack. You then witness each and every stage of development. From the grading of the ground, the wooden scaffolding of the buildings to the finished buildings.

The workers, your loyal population, run around with stacks of wood and stones in their arms, the baker kneads the dough and bakes the bread and the



Riding off into the sunset.

joiner saws up the wood. In fact there are over 20 professions at work in your town all linked by paths and served by carriers who transport the raw materials to be processed, refined and fabricated into workable items.

Much of the programming time was spent teaching the computer the basic facts of running an economic system. This involves control of production compared to supply and demand and the supervision of transport systems. For example, if a windmill is located next to a farmer, the program has to first find out if the windmill has the capacity to process the corn, otherwise it has to transport it to another place. Providing of course that there is a road to get it there.

It will handle the execution of your decisions and command your numerous settlers. The little men will cut down trees, build houses, work in the mines, construct weapons and tools, dispatch construction materials in the places where they are needed, defend their castles against enemy knights, and provide miners with food. The computer is doing everything that the player isn't, which is a remarkable job controlling not only the economic and military interests of the player's environment but also all the computer generated players and their environments as well, totalling some 64,000 little people at the same time without slowing down at all!



A clean fresh start as the new day dawns.

Although the game is driven by an economic model of supply and demand, the real game lies in constructing a prosperous and well organised city that is self sufficient. Simple huh? It is better explained if you tackle the problems from the end of the game backwards!

In order to conquer all the enemy castles (and win!) you will need many knights. To keep their morale up you will need gold, and for their weapons, iron and coal. These raw materials can be mined, providing you prospect in the right places by sending out geologists to take samples. Once your mines are built, you must keep your miners fed, and the raw materials must be melted in a foundry.

The food supply is provided by the fishermen and the farmers, but they



The intro has excellent images.

need tools as do all the other workers. These are made by smithies. To build huts, houses, farms, and castles you need basic construction materials like wood provided by the lumberjacks and finished through sawmills and stone hacked out of granite through quarries and stonecutters.

The lumberjacks can only work if there are trees to cut down, and lets face it forests do not last forever do they, so appointing forest rangers to plant trees is a good idea. Similarly, farmers need to plant wheatfields and supply the mills, which in turn supply the baker with flour.

Attention to detail is astounding, there are ranks amongst the knights, second class corporals, lieutenants and captains, and the miners strike if they are not fed sufficiently and parade up and down the outside of their mine waving placards!

The game can be played on a number of levels depending on your mood and ability, with over 50 missions to tackle with 10 additional training missions to get you going. One or two players against each other or the computer, and a demo mode where you can just sit and be entertained while your computer generates its very own soap opera in front of your eyes.

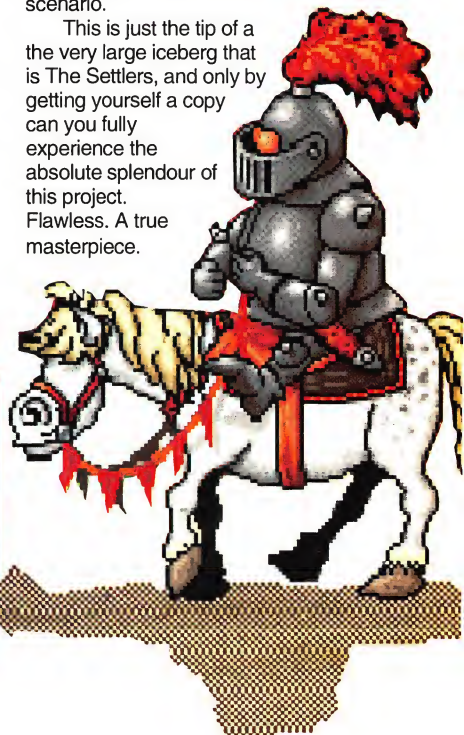
With so much to do life can get a mite confusing, so thankfully you can send yourself messages at set times for

all manner of things and be recalled to the spot where you want to do something a bit later on.

Finally, the game world comes in a number of sizes depending on the memory of your computer, not only that, there are around 270 billion combinations of possible land type and opponents. This is accessed by a 16 digit code which when entered will always produce the same type of world. So at the end of the game if you had a great challenging epic, give the code to friend

and let them try their luck in the same scenario.

This is just the tip of a the very large iceberg that is The Settlers, and only by getting yourself a copy can you fully experience the absolute splendour of this project. Flawless. A true masterpiece.



### VERDICT

<b>GRAPHICS</b>	<b>97%</b>
<b>SOUND</b>	<b>80%</b>
<b>GAMEPLAY</b>	<b>98%</b>
<b>OVERALL</b>	<b>97%</b>



# ZOOL 2

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£25.99

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No wonder there's a special mention about epilepsy in the front of the manual. Sit well away from the screen, or you'll all soon be



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Was this because I am 'allergic' to platform games? Do I get off on strategy games? Is Ashley Cotter-Cairns losing his touch, becoming a Victor Meldrew-like old fogie?

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Let's examine the evidence.

An evil Krool lieutenant is threatening the Nth Dimension all over again. Zool has been pulled out of a retirement featuring lots of attractive ant/bee females (Zool included, the female co-star of the game) and all of the coconut ice he

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Each world has its own graphical style and the artist has heaped his palette onto the lands with gusto, trying his best to outdo Jackson Pollack for imaginative clashing.

Zool - or Zoos, if you prefer the female angle - moves as smoothly as a snake in an oil can. Zool has always been a cool mover and, if anything, his new body is even more supple than the last.

The monsters have had an overhaul as well as the landscapes



Twinkle twinkle little star, how I wonder what Zool are...

and now both are even more attractive. World One looks pretty similar to the first world of Zool, but every other level is very different from anything you'll have come across in the first game.

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The adventure side is definitely the strength of this game, although it still encounters the traditional problems. Some of the problems have very logical



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Stranded on some rock, he has various stages to navigate before reaching his terrestrial destination. The action is all joystick controlled and is a mix of adventure, where the usual 'pickup/use/give' commands appear and platform arcade parts. The arcade parts are simple to say the least. I don't mean that they're easy - although the first few are - it's

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**£25.99**

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Despite all my groans, I enjoyed Cosmic Spacehead. The graphics really cheered up a drab day and even though Cosmic himself gets bored too easily and starts tapping his foot the instant you don't keep him in motion, I kept playing it. I think the game probably appeals to the younger gamer, although I am going to continue playing it. Cosmic intrigues me, but I can see that some people will simply expect more of a game than bright colours and uncomplicated gameplay. Personally, although this type of game has been executed before with more zest, by Lucasfilm for instance, I am enjoying the time Cosmic and I are spending together.



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Maybe it's the thrill of leading a huge army across all kinds of terrain, blasting enemy tanks out of the way, knocking choppers from the sky and torpedoing battleships that oppose our fleets. Maybe it's a sense of patriotism, a feeling that I'm doing my best for Queen and country against the marauding enemy.

with the game using the manual as little as possible.

Campaign II, for those who also persevere with the learning process, is actually a pretty meaty wargame, with lots of extra options.

command your planes, 'copters and tanks from behind the joystick (in both simulated and real, chunky plastic form). 3D mode in a battle switches to an option screen, from which point you can opt for full control, just weapons control (my favourite), just driving or just tactical control (boring!).

The 3D movement is really good, very detailed (although you can reduce the detail to save speed) and smooth. Even

they make up for in detail and the tactics are easy to implement.

Moving a group of tanks or other hardware is as simple as clicking on the group and then the destination in mind. The computer will ask you, if the destination is in range, if you'd rather just fire upon the enemy, but, of course, you don't get the joy of blazing away with your gun turrets if you do.

What I most like about

# Campaign II

EMPIRE

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It's probably just the uniform.

Whatever makes you enjoy a good military campaign, you're bound to find it here. Campaign II is a huge, sprawling game in a huge, sprawling box which will make any strategy fan pull out his eye teeth to trade them for it and any arcade fan run for cover. You get to lead a massive army in a number of battles, which collectively make up the campaign itself.

What I like about Campaign II is its tremendous range of options, from a map editor to simulation modes of play. What I dislike intensely about Campaign II is the user guide.

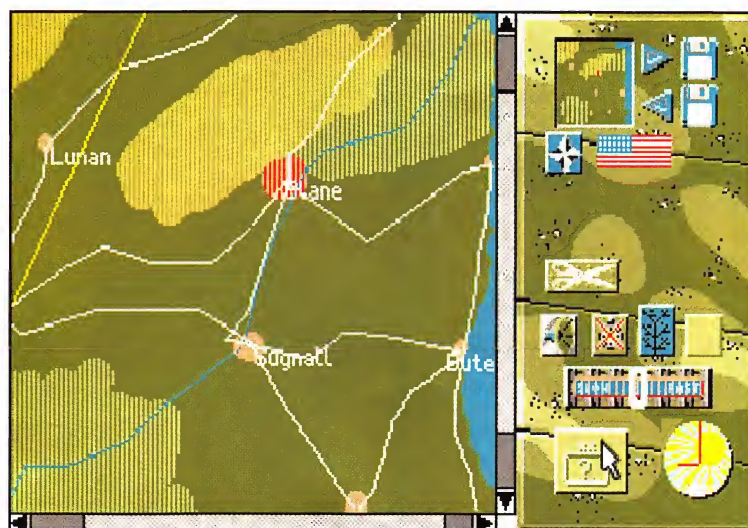
It's crap. Some quotes from this drivelling tome of semi-instruction: "The main picture is just that - a picture."

"The root is the part from which the rest of the tree grows, and so this, the most important part, is shown at the top of the screen."

"Things remain hidden to the other side until they are spotted, whereupon they remain visible until a short while after they have gone out of range."

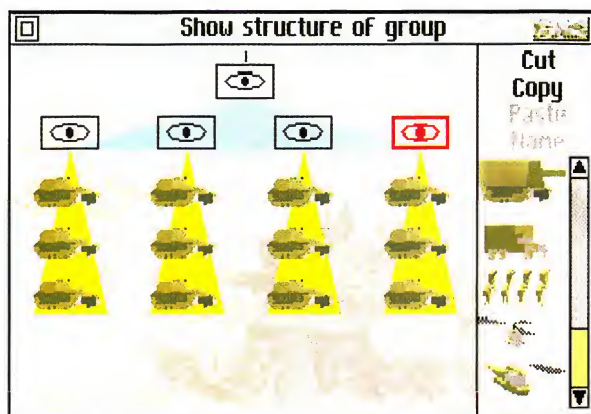
I think you've got the idea by now. With a game like Campaign II, the manual is vital because strategy games take a very long time to get into as it is. If the manual is boringly designed and boringly written, it's going to put people off.

I persevered and got to grips



Nothing you can do that can't be done... Only things which are visible can be seen and then only when you can see them. All you need is love...and war.

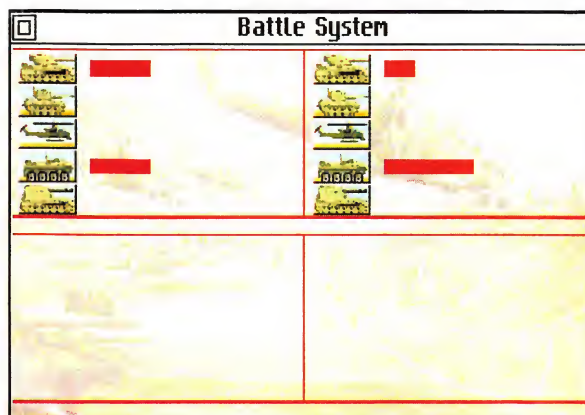
Strategy freaks would lie down and die if asked to pilot anything, much preferring the thrill of giving other people orders and seeing them executed. However, this may be



Even shoot 'em and beat 'em up Arcadians may like the chance to be a Stormin' Norman for the day.

a little yawn-provoking for the likes of people like me, who prefer to see the whites of a person's eyes before melting them with a flamethrower.

For us sadistic maniacs, Campaign II is actually very exciting, because it allows you to



Campaign II allows you to drive the tanks, fly the choppers and smoke the cigars. But not read the manual.

the sound is worthy of a simulation and, when you consider that there's a lot of wargame and a map editor on the same single disk as well, it's even more impressive. We're not talking about Gunship 2000 standards here, but real enough for all but the fussiest of aircraft technicians and tankophiles.

The maps are pretty dull to behold, unfortunately, because that may put you off the game from the start. Luckily, what they lack in visual attractiveness

I don't think that Campaign II is the best, most playable wargame I've ever seen nor is it kind to newcomers to the genre. But the ability to control your forces, or just take a back seat, is a great bonus

to an otherwise below-par game, one which lifts it from the mire into the very acceptable.

## VERDICT

GRAPHICS	75%
SOUND	78%
GAMEPLAY	75%
OVERALL	70%



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## PREVIEW RISE OF THE ROBOTS

**Mirage**

This is the first in house release from Mirage and marks a step forward in software design. Rise has been created using radical 3D modelling software that produces ray traced graphics that are supposed to be more realistic and more animated than ever before.

Each robot character has been modelled element by element from original blueprint designs and shaped to its exact dimensions. The whole figure is then linked hierarchically enabling the robot to animate realistically. As in the movie Terminator 2, there are some spectacular effects, like the morphing of a liquid metal robot and the shattering sequences when a robot is defeated.

The plot is set in the vast Electrocorp building where military and industrial robotics are manufactured. All the human staff have been replaced by a super intelligent 'Supervisor' robot, which has become infected by a virus and has taken over the whole factory including the robots within. You control a Cyborg, immune to the virus which has entered the building and must fight its way through the various defence robots to face the mighty Supervisor, whose various special moves include melting to avoid a punch and forming spiked hands!

A full review will appear in the next issue.



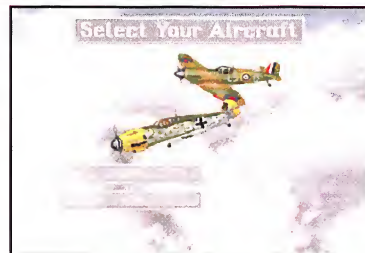
Two magnificent machines face up to each other.  
"All right people, listen up! I want this to go smooth and by the numbers..."

## DOGFIGHT - 50 YEARS OF AERIAL WARFARE

**Microprose 1 Meg £29.95**



Choose one to one, mission or what if...



Duel mode - one on one.



I'm on his tail.



He's behind you!

With a choice of 12 legendary fighter aircraft, each with their own individual flight characteristics and 6 accurately mapped historical scenarios, DOGFIGHT is a pure air combat sim that gives you one on one action from the world go.

The idea is quite novel. Imagine you are in World War One flying an aircraft made out of wood, canvas and wire over the deadly trenches of Ypres. You then, after downing the required number of Boche, fancy taking a quantum leap in time and jump into the cockpit of the very latest fly by wire jet travelling at twice the speed of sound. Blam! You are now in Syrian airspace using a HUD display to target your next attack.

After that, well you can choose World War 2, The Falklands, Vietnam or a mixture of all. On top of that, you can also make strategic decisions within each scenario, enabling you to plan combat missions from attacking Zeppelins to destroying SAM sites. There are also extra resources at your command such as other fighters and bombers which you can order to attack or defend your position.

The key to the game is the adaptability of it, the chance to just leap into action at any point in the proceedings. You even get the chance to decide how many fighters will be against you and just where you

want to start your attack, from behind your opponents, side by side, coming down from above, below or head on!

The most bizarre mix of all is to attempt to fight in Syria against state of the art jet fighters using a Sopwith Camel, or visa versa!

Dogfight is fun to play, but seriously flawed. It is all very well sitting in your MIG seeking out seven Fokkers to blast out of the sky, but incredibly they seem to move just as fast as you. No sooner have you locked on to one than it disappears and ends up coming up behind you.

You get the now standard Microprose all round views and detailed cockpit graphics, along with the usual hefty manual, which is well written and contains an in depth tutorial for novice pilots.

All in all an entertaining package that is fun to play but lacks the real depth of a war campaign sim.

### VERDICT

<b>GRAPHICS</b>	<b>72%</b>
<b>SOUND</b>	<b>67%</b>
<b>GAMEPLAY</b>	<b>56%</b>
<b>OVERALL</b>	<b>61%</b>

## MAGIC BOY

**Empire Software £24.95**

Little Hewlett, the trainee sorcerer, has stayed behind after classes to swat up some more and accidentally frees the Grand Wizard's collection of crazy pets out of the basement. Hewlett has only the rest of the night to find them all and put them back.

That is it as far as plot is concerned in this fairly average platformer from Empire. It tries to be cute, colourful and challenging, but fails on two out of the three for me. It is colourful though. 64 levels of which 4 can be accessed at any time and 32 secret bonus levels are

One of the bonus levels.

A typical cutie-pie level.



specialities on this predictable menu, which, whilst offering you a few moments of light relief are nothing you haven't seen beforehand, soon becomes tedious. This

is another full price release which has 'BUDGET' written all over it, even down to the dreadfully produced manual, which is nothing more than word processed pages with a cover. A saving grace is that another game 'Cool Croc Twins' is included in the pack, which gives you more of the same. If you want a platformer stick to Zool 2 or Alfie Chicken.

### VERDICT

<b>GRAPHICS</b>	<b>75%</b>
<b>SOUND</b>	<b>56%</b>
<b>GAMEPLAY</b>	<b>34%</b>
<b>OVERALL</b>	<b>35%</b>



# Black Crypt

**Hit Squad/  
Electronic Arts**  
**1 Meg £12.99**

Wait! I know it's a budget release. That doesn't mean it's an old game and therefore no use.

Black Crypt is an RPG viewed in the normal 3D perspective and works in the usual icon driven. You get the option to personalise your crack team of adventurers before heading into the dungeon worlds. In other words, it has everything you expect.

The graphics are reasonable and the gameplay is fun. It is a bit of a pain at the beginning as you spend your time picking everything up. Weapons and spells need to blend well for you to succeed.

You want to know the plot? OK, Estoroth, the dark lord, was banished years ago and is now staging a comeback intending a world tour involving mass destruction. You lucky four get to try and stop him. I don't know why you're silly enough to try, but you are. Somehow, this turn of events doesn't surprise me. Seems to happen every day at the moment. Something in the water I expect. Look at that, another Lord of Darkness out to conquer the world - better go and stop him.

## VERDICT

<b>GRAPHICS</b>	<b>80%</b>
<b>SOUND</b>	<b>60%</b>
<b>GAMEPLAY</b>	<b>76%</b>
<b>OVERALL</b>	<b>78%</b>

"I'm not asking £100, not £50, not even £40. No thirty quid ladies and gentlemen and these three games are all yours."

Not bad at all. Thrity pounds gets you F-19 Stealth Fighter, Pacific Islands and Silent Service 2. Three stonking good sims.

F-19 is a simulation from Microprose and as you can guess contains their usual eye for detail. The fun of taking state of the art aircraft into action is equalled only by the fact that you can bail out without worrying about the millions of pounds you've just blown sky high. In fact, you'll probably get little more than a "Try and bring her home in one piece next time." This game is great fun; it takes a while to get used to the controls as does any Microprose sim,

# Combat Classics 2

**Empire Software 1 Meg £29.99**

but it's easy to get hooked. Chocks away!

Pacific Islands is a tank sim from Empire. It doesn't look as good as F-19 in that the graphics are not quite as polished. Commanding units and juggling all the skills is not an easy task, but one that can be fun.

Lastly, there's Silent Service 2. The sequel to the popular submarine sim, this game completes the pack which allows you to test your skills in every element. The

graphics are great and the gameplay is engrossing.

Each game was a winner in its time and the three of them together for this price is an offer not to be missed, if you like sims that is.

## VERDICT

<b>GRAPHICS</b>	<b>85%</b>
<b>SOUND</b>	<b>70%</b>
<b>GAMEPLAY</b>	<b>90%</b>
<b>OVERALL</b>	<b>85%</b>

# Fury of the Furrries

**Mindscape 1Meg £29.99**

A very strange title and an equally bizarre plot bless this game. Small furry creatures called Tinies which are, apparently, extremely mischevious, have returned to their home planet after a pointless sortie. They find their planet in uproar and anarchy and decide to sort it out - as you do if you are an 'extremely mischevious' creature. I'd have thought uproar was just their scene.

Anyway, you control a set of Furrries, or rather of one who metamorphoses (some of us can still use the full unabreviated word!) between four characters with individual powers. In this sense the game smacks of 'Morph', the game where the solution lay in the correct use of form for each area. Here to certain areas can only be navigated by choosing the right Tiny.

This really isn't too difficult and I must say that I kept wondering when I would have to actually do anything. For me the levels seemed somewhat sparse, especially to start with. Mostly it was a case of navigating static



We're furry and we're mean.

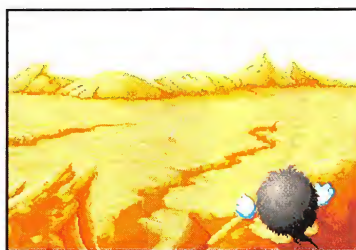
traps, which doesn't really get you on the edge of your seat.

The graphics are of a good, but not exceptional standard. I suppose I have to say the same

brief shelf life before disappearing. Don't misunderstand, the game is not exactly deficient, just not outstanding.

## VERDICT

<b>GRAPHICS</b>	<b>67%</b>
<b>SOUND</b>	<b>66%</b>
<b>GAMEPLAY</b>	<b>67%</b>
<b>OVERALL</b>	<b>65%</b>



A nosey Furrie investigates a noise.

of the music. As I seem to have to say too often, this game is reasonable, but not arresting. It won't be a 'classic', but will live its



**T**his complete Spanish language course offers 24 programs designed primarily for GCSE level but it is also likely to be useful for business, as it includes a program which generates Spanish business letters. Holiday makers would also benefit too. The course covers spoken Spanish, vocabulary, verbs and grammar. The serious elements are interspersed with games, which include a graphics adventure game, puzzles and pictures such as the Holiday Madness graphics adventure game. This should only be played when you have a basic grasp of the vocabulary, as it involves a bus journey because the hotel you booked into is further from the beach than your brochure would have you believe. (That can't be Spain, can it?) The bus rattles and shakes its way along the beach to a pretty awful tune which makes you feel travel sick if it goes on too long!

A small but useful book, a full version of Harrap's Spanish Vocabulary, is included in the box along with a helpful explanatory leaflet. The course of 24 programs takes beginners up to GCSE following the National Curriculum, which tests at 14 and 16 years at key stage 3 and 4. The levels of attainment targets are broken down program by program, preparing students for both oral and written exams.

Micro Spanish has an electronic interpreter included which can also be used to translate or to access the course notes by selecting the key marked 'Help'. Probably the most appealing feature is the inclusion of real speech. You have to fill in the form about yourself in English words, letters or numbers and then listen to each question. You reply in Spanish by selecting the appropriate answer. In privacy, you can practice your accent without feeling too self-conscious. After all, your Amiga knows you pretty well by now. Most encouragingly the program attempts to teach you to think in Spanish, rather than translating word by word.

When you believe you have made sense of the words, the Newspaper program lets you test out your general understanding. This program involves reading an article from a Spanish newspaper and answering questions about it. The important words are given in

the first few questions and the rest you must learn to guess from their context.

Having mastered the rudiments of the language you are now ready for 'role play' - which teaches some useful Spanish sentences for

rapid thinking. One drawback, noticed by our senior tester who is

# MICRO SPANISH

## LCL

### Martin Witton learns to shout Olé! with the correct accent.

taking Spanish at University, was that if your vocabulary stretches further than that permitted by the program, you may be marked incorrect because the program doesn't allow you any variation from the already set answer. In the

language. While the interface is not difficult to use, a little more imagination could have created a less plodding way of accessing the undoubtedly substantial material on the two disks. And the whole thing could have been brightened up by a more professional design even of the word pages. But for its practical purpose is a very recommendable edutainment program that can be used with enjoyment and profit by almost any age group. **a**

# 75%



Title pages aren't the most exciting thing in any language, but look what you can learn from this program.

surviving in a Spanish-speaking country. The problem is described in Spanish and then you have to key in what you would say in Spanish after speaking it aloud. This is very useful though it is said the best way to learn any language is to find someone to give you a thorough immersion in the ideas and culture of a country as well as its language. Sometime this is called getting a "Pillow Dictionary" but Spanish fisherman whom British holidaying girls are reputed to favour may not be the most academically qualified as language tutors.

If you pick up this package with the idea of learning and not just watching then you must take into account the perseverance and self-motivation needed to follow a self-tuition course. However, by being able to see one's own general improvement of knowledge each step can be a rewarding experience.

You are marked by a percentage at the top of the screen with a seconds timer to encourage

program all questions are simply laid out with clear guidelines on how to answer them. However a small criticism is the dullness of the colours used on the word screens. Why is it necessary to use such muted colours and dark backgrounds? It didn't encourage me and I don't think making it look so serious or, in fact, boring helps at all.

## conclusion

Micro Spanish is certainly a well-worked out program and offers a simple but effective way of acquiring a basic knowledge of the



The pronunciation is a useful aid to getting the right sound as letters are not pronounced the same way as in English.

## INFO

Price: £24.99  
Contact: LCL  
Thames House, 73 Blandy Road,  
Henley-on-Thames, RG9 1QB  
Tel: 0491 579345





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The DIRECTOR II 32 bit system card brings the ultimate in graphics processing power to the Amiga and PC Platforms. When used with a range of readily available software packages the DIRECTOR II allows you to upgrade your office and home Amiga or PC to provide broadcast quality Paint, 3D Modelling, Morphing and CAD capabilities. Consider the uses for a system as powerful as this. Professional video production, animation, CAD, scientific visualisation and many other integrated video/computer graphics applications are all achievable.

### FEATURES

- 24 Bit live image capture.
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- 4 Meg VRAM & 4 Meg CPU DRAM.
- On board TMS 34020 processor with optional 34082 co-processor.
- Powerful expansion port for additional RAM and accessories.
- Available in Amiga or PC versions.

### PROCESSING POWER

The expandable design of DIRECTOR II boasts enough VRAM for a double buffered 32 bit display in PAL. The output may be scrolled directly from an internal buffer of 1024 x 1024 pixels in 32 bit. Horizontal resolution is infinitely programmable from 640 to 1500 pixels in 525 or 625 line rates. Increased resolutions are possible using the extra crystal sockets provided.

4 Megs of DRAM are provided, either as a graphics scratch pad or to run stand alone 34020 code, enabling the use of the optional 34082 co-processor for ultra fast rendering calculations. Optional expansion cards may be added to the ports on the top of the DIRECTOR II. These accessory cards fit into the PC slots on the Amiga or PC for user convenience.

### SOFTWARE COMPATIBILITY

Director II is supported by many of the leading Paint, 3D Modelling, Morphing and CAD software packages. Animation control is also available and our policy of continued development means we will be constantly working with other software developers to increase the libraries available to us and to include features such as, DVE with 3D effects.

### TECHNICAL

The CPU used in Director II is a Texas Instrument TMS 34020 graphics processor running at 32Mhz or 40Mhz (with optional TMS 34082 maths and 3D co-processor).

4Mb of 64-bit VRAM for image storage plus 4Mb of 32-bit DRAM for processor use is provided.

The Director II on the Amiga configures as both a contiguous 4Mb block with separate 64K control window (an '030 or '040 accelerator with extended ram is recommended for use if not already fitted as standard). The PC version is port mapped and configures using standard jumper links.

A high definition version of Director II is available to output 1250 and 1125 lines.

*Tritec Marketing*

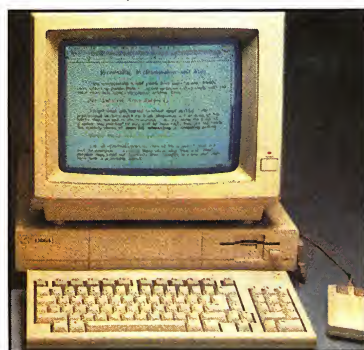
Tritec Marketing Limited  
54-56 Station Approach, South Ruislip, Middlesex HA4 6SA  
Tel: 081 845 1400 Fax: 081 842 2781



# 10 things You Should About The

## 1 A1000

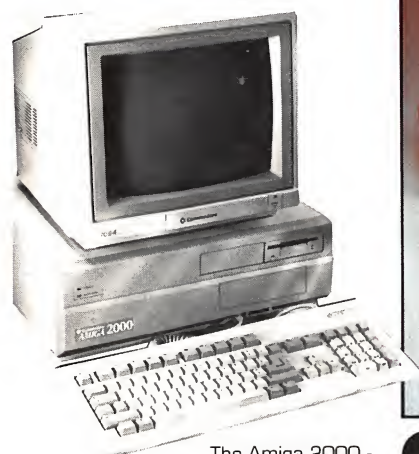
Introduced in 1985, the very first Amiga - the A1000 - had a mere 128K of RAM (later increased to 256K) and required Kickstart to be loaded from floppy before anything could be done. These specifications may seem humble today, but the A1000 was admired by all those who encountered it, even at the price of around £1700.



The A1000... in its time considered a power house of a machine that was more user friendly than any other computer.

## 2 A2000 & A1500

Two years later, Commodore's next machine was the 2000, coming in at just under the £2000 mark. It had a case large enough to incorporate its 5 Zorro II slots and a video slot. The latter made the first Video Toaster possible. It could run PC software via a bridgeboard and came with a 3 1/2 disk drive (and an option of a 5 1/4"), a megabyte of RAM and Kickstart now on ROM.



The Amiga 2000 - Commodore said "Now we mean business!" It gave birth to the Video Toaster, but became in the UK a pretend 1500.

The A1500, appearing in November 1990, was only sold in the UK and was really only an A2000 with two 3 1/2 disk drives. In fact, 1500 owners may find that peeling back the 1500 badges reveals the 2000 label underneath!

## 3 A500 & A500+

For most people, this is the model which stands for Amiga. The most successful of the range (to date), the 500 was also launched in 1987. It had Kickstart 1.2 on ROM and 512K of RAM. The cost of £599 rapidly fell to £399. The relatively low price helped to establish the machine as THE home computer of the late 80s.

A games machine that doubled as a home business computer with superb expandability, it was adored by the public and third party developers - once wedded to the ST - jumped on the bandwagon. It was later upgraded to the A500+ with the ECS (Enhanced Chip Set) and 1 Meg of RAM as standard.

The most successful Amiga was bundled with everything under the sun. The public loved it and made it a smashing success.



## 4 A3000

Commodore's march of progress continued in October of 1990 when they released the A3000, which now sported Zorro III expansion slots. The A3000 was powered by the 68030 processor and had the much improved Kickstart 2. A powerful machine, the 3000 quickly gained the support of third party developers who bestowed it with 24 bit graphics. At first the price was about its title - £3000, but PC prices were falling fast and that limited its market share. However, those who bought the 3000 still seem to be utterly loyal.



## 5 CDTV

Commodore Dynamic Total Vision (!). Oh dear. A rather unfortunate blemish on Commodore's record here. Launched in May 1991, it was essentially an A500 with a CD drive. It looked like a CD player and was supposed to bring multimedia to the masses for a somewhat prohibitive £599.

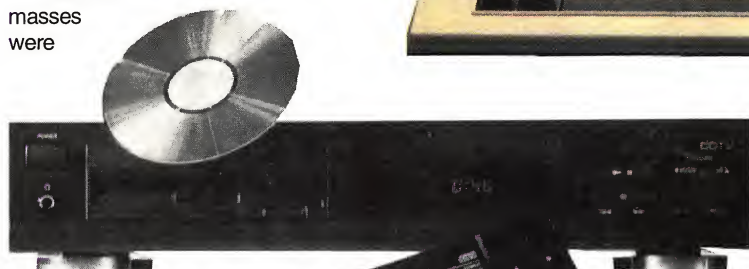
When the top of the range came out, its price held it back. But quality always wins through and this machine gave professional users the power they needed.



# Know Amiga

Initially Commodore refused to let it be associated even within a short physical distance of the Amiga.

But the masses were



obviously not ready. Estimated sales of the 16 bit machine were around 25,000 and in its first year CDTV sold more than the A500 had - not bad for a new technology. But the masses were obviously not ready to move into the CD age. It has been replaced by the new CD 32 - based on the more advanced 32 bit A1200.

An attempt at multimedia for the masses went awry when the Amiga factor was ignored.

## 6 A600

Incredibly, this machine did very well considering that its shelf lifespan was marginally longer than that of a fruit fly. The A600 was an A500+ manufactured with surface mount technology which made it both smaller and more reliable. However, it did not permit much in the way of upgrading which did not make it popular with more serious users. And it looked like a toy...

It also came in bundles and had the option of a hard drive fitted, but had no numerical keypad. Starting at £399 when it first appeared in April 1992, you can now pick one up for £199 - great value for the first time Amiga user.



An attempt to plug the gap after the popular A500, the A600 was given too little specification and too little time.



## 7 A4000/030 & A4000/040

At present these two are the top end Amigas. Powered by the 68030 EC and the 68040, the A4000 has the capability to rule the world, sorry, do just about anything. The 040 was launched in September 1992 and the 030 followed in March of the next year. The AGA chipset and Workbench 3 combined with its processing power has made it an attractive machine for professional users. It has found its way into everything from producing cartoon characters for television to multimedia controls at museums.

The A4000 has made sure that the Amiga is no longer taken lightly in professional circles.

## 8 A1200

Possibly this is the most amazing value Amiga ever. Launched at £399 in autumn 1992, with its 32 bit technology, it could replace the A500 as the byword for Amigas. It has the 68020 EC processor and the AGA chipset. An A1200 with hard drive is so inexpensive and yet so powerful that the machine is being snatched up by a rightly appreciative public. Now in a bundle at £349, the stand alone is down to below £299 - a real bargain. If you haven't got one, don't walk, run to the nearest dealer and get it.



The A1200 is a real bundle of delight and superb value. It has 32 bit technology and an AGA chipset.

## 9 Amiga CD 32

Launched in September 1993, costing £299, the Amiga CD32 is being presented as an upmarket games console in competition with the toy level Nintendos and Segas. A machine with great potential... are Commodore making another mistake in not pitching it directly at the Amiga market? It is really an A1200 with a

CD drive. It will soon be able to play films from CD when Commodore make the FMV (Full Motion Video) module available. CD quality sound and AGA graphics make the CD 32 the most logical choice for anyone looking for a games machine. The rumours are that a keyboard and mouse will also become available to make the CD 32 a fully functional computer. Sega and Nintendo could be in real trouble.

## 10 A5000?

Pure conjecture here - an A4000 with the AAA chipset that is being tested now, running at a higher clock rate, 33 MHz or even 40 Mhz. It will have 16 Bit, 8 channel sound and allow up to 64 Mb of RAM on the motherboard (or so Lew Eggebrecht claimed - as reported in AU). Personally, we wonder if we might eventually see the long awaited, long promised MSDOS compatibility and what about Mac compatibility too? It's all possible, but we shall just have to wait and see. It's not as if there aren't enough types of Amiga out there already to keep us going for a while.



# VIDEO COLUMN

**Alan Puzey keeps you in the picture on the video scene.**

**INFO**  
Contact: Silica Systems  
1-4 The Mews, Hatherley Road,  
Sidcup, Kent DA144DX  
Tel: 081 309 1111.



Numerous remote control and panel buttons for this machine, on special offer to *au!* readers.

## super VHS

Tecno have a feature packed Super VHS machine, the VR 813, currently reduced by £200. But if you produce this issue of *au!* when purchasing the machine, they will give you a handful of blank video tapes, to the value of £30. Can't be a bad introduction to the superior quality of Super VHS - which is also compatible (for signal, not cassette, of course) to Hi-8, just in case you have a camcorder of that ilk.

A Super VHS machine is an ideal complement to a hi-band camcorder, allowing editing of much higher quality. The Philips VR813 has some extraordinary features! Even if your TV set is not equipped with Fastext or Teletext, the VR813 will enable you to receive it.

With 'Programme Delivery Control', the video recorder will switch itself on at the exact moment a TV programme commences, even if the actual broadcasting time differs from the scheduled time.

Fantastic! But to do this the broadcasting station must be transmitting the PDC code and at the moment only Channel 4 is doing



Graphic warning about the dangers of some battery dischargers.

this, though the other channels are likely to follow in the near future. No more lost recordings due to a World Cup football match being

rescheduled in front of the programme you wanted!

There is an effective child lock, preventing unauthorized use of the recorder, seven heads for perfect still picture (useful for computing), support for 'widescreen' 16:9 aspect ratio for when this becomes more popular and it can be used as a high-class Hi-Fi Stereo sound-only recorder.

The Philips VR813 is currently £599 at Tecno. For more information, visit any store (preferably with your copy of *au!*) or telephone Andy McCormack on 081 898 2772.

## dischargers

Items such as camcorder battery dischargers fall outside the sphere of *au!* but with an increasing number of Amiga users with camcorders, I feel this merits a mention in this column. The December issue of "Camcorder User" contains an in-depth review of

dischargers, revealing that many of them do more harm than good to your expensive batteries.

For those who haven't come across them, dischargers are used to drain the camcorder battery to the optimum level, which prevents deterioration of the battery - a common occurrence with

casual charging habits. So, if you're thinking of buying one, you'd be well advised to check out the situation first. **a**

**T**wo new hardware items from GVP should have begun shipping by the time you read this. The EGS-28/24 Spectrum is a high performance, high resolution 24 bit graphics board that will take any Amiga 2000, 3000 or 4000 beyond AGA. Working in PAL, SECAM or NTSC with a resolution of 1120 x 832 pixels, it will adapt automatically to 16 bit or 32 bit Zorro slots. It features a pass-through for the Amiga RGB display which means that only one monitor is required - an important feature as Amiga users have sometimes found that similar cards require two monitors in a working set-up.

Multiple boards may be installed in the same Amiga. For professional 3D animators, for example, this means that a wireframe display, the animation itself and control panels can all be viewed at the same time (this would require additional monitors, of course).

The Spectrum system uses the new Enhanced Graphics System device libraries and will support Commodore's RTG graphics standard when this is released. Accompanying the Spectrum is EGS Paint, a real-time 24 bit paint package, claimed to be 'very fast' (!).

The second product is TBCPlus, an internal broadcast quality video processing card. It operates as a time-code receiver/generator operating in all VITC and ITC formats as well as providing a real-time frame grabber and 16.7 million colour frame buffer with paint and image processing software. All the usual special effects such as solarization, pseudo colour, strobe, freeze and monochrome are possible. Composite and Y/C video are handled via a three channel input switcher.

The TBCPlus fits into the Zorro slot of any suitable Amiga and multiple cards may be installed in one machine for professional setups.

Both these products interact with ImageFX, which *au!* rated highly in a recent review. ImageFX has now been upgraded to version 1.5, featuring a new system - 'MAGIC' - that allows applications to share images in memory, reducing memory overheads when multitasking several graphics programs at the same time. MAGIC stands for Multi Application Graphic Image Communication and should prove a very worthwhile addition to the GVP range.



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- ☐ Fruit Salad
- ☐ Asteroids 2
- ☐ Donkey Kong
- ☐ AGA Tetris (1200 only)
- ☐ Gameboy Tetris
- ☐ Tetren
- ☐ Lander
- ☐ Top of The League
- ☐ Space Wars
- ☐ Chess
- ☐ Cliff Hanger
- ☐ Turbo Thrust
- ☐ Verb Quiz
- ☐ Airport
- ☐ Tank Attack
- ☐ Cricket Game
- ☐ F1 Grand Prix Demo
- ☐ Super Skoda Challenge
- ☐ Parachute Joust
- ☐ Atic Atac
- ☐ Llamatron
- ☐ Olympiad (2 Disks)
- ☐ Word Search

### UTILITIES

- ☐ Kick 1.3
- ☐ Kick 1.3+ (1200 only)
- ☐ How To Code In C
- ☐ IQ Tester
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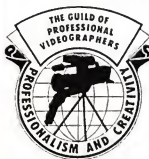
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# 3D TIPS

**Y**ou have a logo and the name of the company on paper.

How do you get these from paper to 2D and finally to 3D? What are the best programs to use and how do you use them?

That is what we're here to answer.

"I hold in my hand... a piece of paper." Said Senator McCarthy (no relation!)

This is what you usually start with. So you have two real choices, either you use a scanner or a digitiser to capture the image.

If you use a digitiser, then you'll also need a camera but this does give you a large degree of flexibility.

**Barry McCarthy gives you**

**some hints and valuable tips on how**

**to make that magic symbol live in**

**the third dimension.**

## In The Beginning Was The.. Logo

The camera can also be used to capture textures and objects from real life. The digitiser will enable you to grab images or even sequences of images from video tape. A camera is really ideal for the videographer or creative artist.

The scanner route is a little more direct, with only the scanner itself

necessary for scanning in images. The images themselves, can be of a very high resolution, giving you cleaner and more detailed scans but possibly making objects unnecessarily complex. Also, you don't have so much of a problem with distortions due to uneven

lighting or the physical distortion caused by the lens of a camera. Finally, scanners are ideal for DTP work, so if that's a vital area, you may want to take this route.

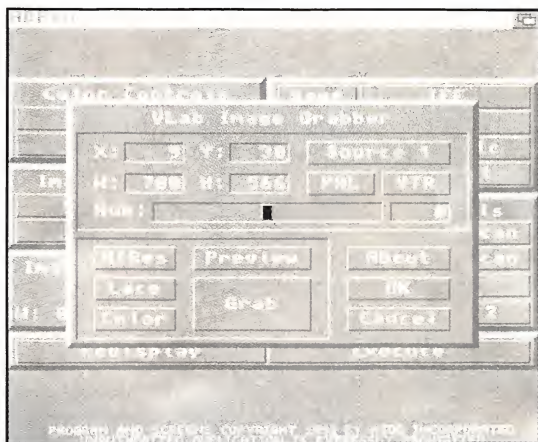
TIP: Lighting is THE most important element of digitising. Make sure it's even (use 2 lights at

least) and try daylight bulbs for more accurate colour. Take plenty of time focusing the camera before you digitise.

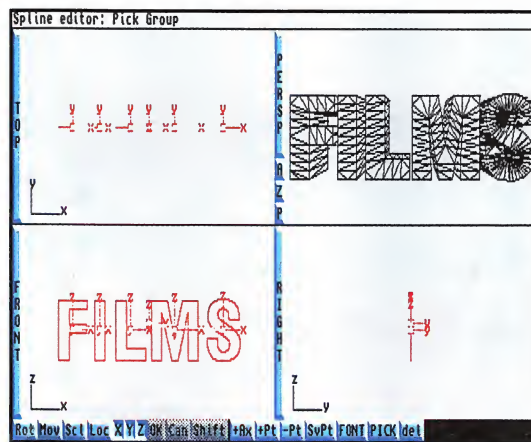
TIP: Digitise the logo as large as possible and as STRAIGHT as possible. This makes the cleaning up process easier. BUT be aware

of parallax distortion. This is essentially lens distortion but most evident at the edges of the lens, where the picture will seem to bow in.

RECOMMENDED: V-Lab y/c and an S-VHS, Hi-8, or Broadcast camera (oh yeah!?). In fact, if you can afford it, get a scanner too.



Art Department Pro's VLab Loader.



Imagine's 2.9's Spline Editor.

## cleaning up

Now comes the worst bit. You have to take your captured images and convert them to a useful image format and THEN clean them up. This involves removing any artifacts and unnecessary pixels by HAND. Yuch! The main point here is to make sure that your image conversion stage automatically removes most of these unwanted bits, making the hand-made bit easier.

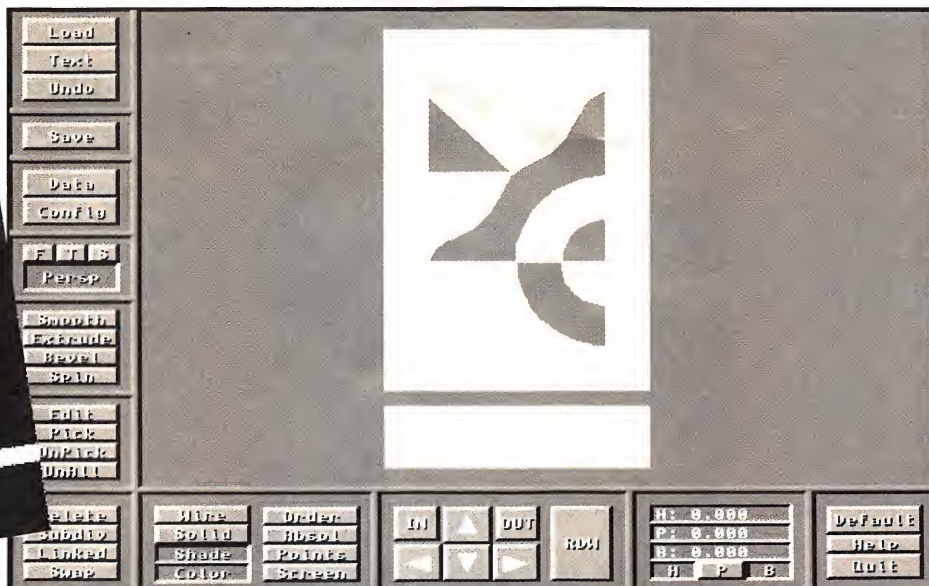
Programs to try would be Art Department Pro, Image FX and Image Master. After lots of fiddling about, I find ADPro still produces the best results with some ideal tools, a good speed and the ability to capture straight into the program. Mind you the new versions of both the other two are now extremely close and they have much more agreeable interfaces.

RECOMMENDED: Art Department Professional 2.3 then Image FX 1.5 and Image Master.

TIPS: Capture your image in 24 bit. In ADPro, raise the brightness



The logo cleaned in DPaint.



The logo converted to 3D.





The logo executed in Art Department Pro.

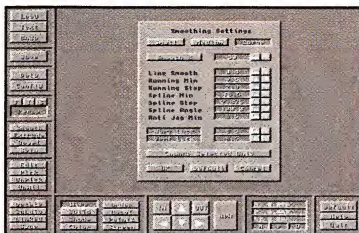


The logo grabbed in 24-bit.

and contrast (very high) and Execute in 2 colours. Now use Rem\_Isolated\_Pxls. If your lighting was good, the image can be very close to perfect. It's a good idea to experiment with different brightness and contrast settings.

Now comes the bit I hate. Load the logo into Brilliance or Deluxe Paint and spend a bit of time cleaning it up by hand. Straighten edges, make curves more natural. The best tools to use are straight line, magnify and stencil but after a while you'll be able to do this pretty quickly and almost without thinking.

RECOMMENDED: Brilliance and Deluxe Paint are the only two



Pixel 3D Pro is the most complicated.

real contenders and they're both very good at the job. My personal fave is probably Deluxe Paint but that's because I know it so well.

## three dee

Now to turn your picture into a 3D shape, you'll need to make sure of a few things. Ensure your logo picture is on top of colour 0. In other words, colour 0 (The first colour in the left of the palette. Usually black but it doesn't have to be.) will be entirely transparent. A hole.

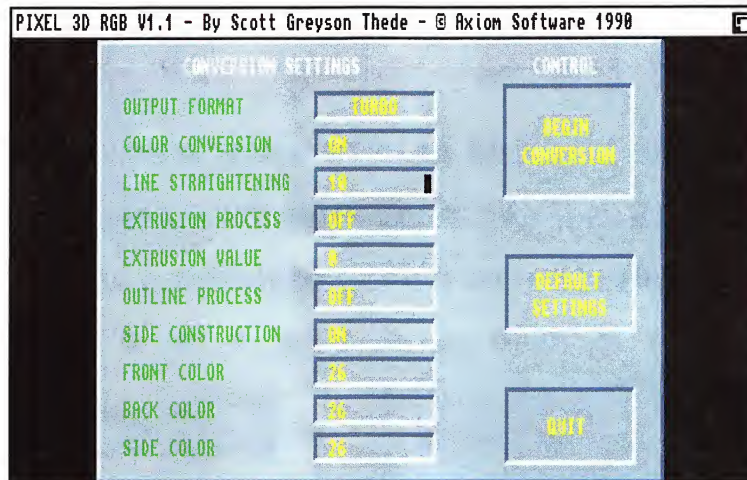
There are several programs that you can now use to do the actual conversion process. Pixel 3D 1.1, Pixel 3D 2, Pixel 3D Pro, Imagine 2.2.9/3.0. Hang on, why put Pixel 3D down 3 times? Ah well, I've recently found that after struggling for eons with the overtly complex conversion routines of Pixel 3D Pro, I've gone back to the earlier versions. In fact version 1.1 is the best for a straight conversion from 2D to 3D. Just choose the output format and set line straightening to

10. That's all there is to it. Blissfully uncomplicated. If you need fancy bevelling then Pixel 3D Pro is the only current choice but it's a nightmare to get conversions right and the manual helps not at all.

Imagine 2.0+ will also convert from within the detail editor. It's pretty basic but it can work well with some logos, give it a try (anything that means you don't have to struggle with PixPro).

## text

What about text? Right, well we've



Pixel 3D 1.1 is the best.

got a few good choices here. The best way by far, is to use a scaleable font and convert directly from this to 3D. PowerFonts (now version 2 I believe but hard to get hold of) from Activa International, is a superb product and works brilliantly with Compugraphic fonts. If you're using Real 3D, then it's THE choice but it's just as good with other formats. By the way, you may soon see it incorporated into the next version of Real 3D 2.

The other choice is Imagine 2.9/3.0. Eh? The latest version of Imagine has a Spline Editor. As you may have read in our Imagine

2.9 review (this **AUI**), this does the same job as PowerFonts but using PostScript type 1 fonts. Why not Compugraphic? Why? Why? Why? WAIT! I've changed my mind (a bit).

PostScript is an accepted standard on Mac and MSDOS as well as most mini/main-frames and UNIX platforms, in fact everything. Everything except the Amiga. It has its OWN universal format! I say; use PostScript because everyone else does. We NEED to be part of the wider view and things like PostScript, DXF, ascii... are all essential elements. If the Amiga

and its software does not make itself able to adapt to all platforms, it simply will not survive. The world is too big and the Amiga is too small (at the moment).

Back to Imagine 2.9. The spline editor is, in fact, very super. I may have been a little harsh at the time. The main problem of not many fonts seeming to load can be solved with another piece of software. TypeSmith, from SoftLogic Corp. This is a fabulous program, that can turn fonts backwards and forwards between pretty much any format, Amiga or no. Thanks to Graham Baldock for lending it to me. Now

you need only obtain one type of font format (ANY format).

Where from? PD libraries for Amiga and PC (the A4000 can read DD or HD PC 3.5" disks) provide a large source. The other place to look, if you have a modem, are BBSs. These can be a very rich source of excellent fonts.

If you can't find the exact font to match the logo's lettering, either edit it in Imagine 2.9/3.0 or you may have to treat it the same as the logo (do it by hand).

RECOMMENDED: PowerFonts and Imagine 2.9/3.0.

RECOMMENDED: TypeSmith.

## what next?

The only thing left to do now, might be to extrude the logo in some way. This stage is best left to your 3D program such as Real 3D or Imagine.

Finally, when the logo is in 3D, you can add all the nice textures and surface qualities and animate it. Simple really.

One last piece of advice. Logos need to be very smooth. You can't get away with jagged curves or faces showing in the surfaces. Use as many edges and points as possible. Real 3D has a big advantage, as it uses smooth/curved lines to describe shapes but building logos can be a bit more difficult if they're complex in any way.

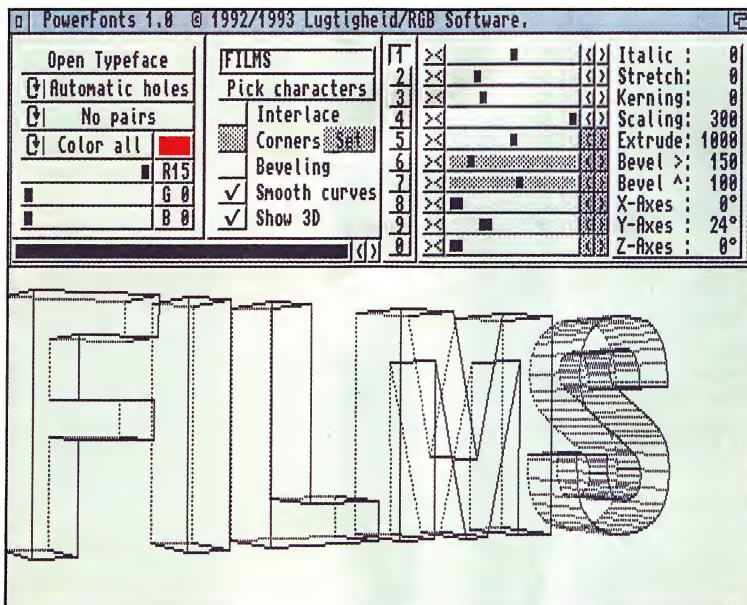
TIP: In Imagine, use Phong shading over the whole object and then Pick Edges for the edges that need to be sharp and use Make Sharp. With a bit of fiddling, this will produce very professional results. **a**

## FINAL RECOMMENDATIONS:

Imagine 2.9/3.0  
Real 3D 1.4/2.35  
ADPro 2.3  
Image FX 1.5  
Brilliance 1+  
Deluxe Paint 4.5 AGA  
Pixel 3D 1.1  
Pixel 3D Pro 1.01  
PowerFonts 1.0/2?  
TypeSmith 1+  
V-Lab y/c

## INFO

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Powerfonts in action.



## Scoring

The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

# The P.D. STAKEOUT

## Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus, 600, or 1200 owners should be aware that roughly half of the software in the public domain will not work with Kickstart 2 or 3. Always ask first.

**Is the Public Domain on the upswing or is this just a good month? Gideon Overhead has dug out loads of nifty and not many nast programs to help you build up your collection at a next to nothing cost.**



## Fantasy Slides

**Disk V1089 KEW=II**

There is only room on this disk for four AGA pictures but they are something special. The first two are by the famous fantasy artist, Boris Valigeo. They both feature monsters and have been scanned in. The pictures are so large that there is not enough screen to view them on, so you have to move around it using the mouse.

The third is an amazing rendered picture of a dragon. This impressed us so much we just had to get it into the magazine. You can

see it on page 109 of the January issue, although it looks a lot better on a monitor. The fourth picture is er, well, how can put it? A lady's rear end! Its very good quality though. (I am, of course, an expert in this sort of thing.)

This disk also contains an excellent GIF viewer which is one of the fastest around. It is much quicker than Viewtek and shows the picture as fast as the Amiga can load it.

**8/10**

## Boggle

**Disk RGA026 Roberta Smith**

The game Boggle brought back memories of my childhood. It is a box which contained 16 Dice. This box was shaken and the dice then fell into a grid. The object was to make as many words as possible out of the letters within a specified time limit.

This computer version works well. The dice are selected and are accompanied by a suitable rattling sound. You select the words either by clicking on the dice and then pressing return, or by simply using



the keyboard. This is a preview copy, if you want the full version you will have to register. This will cost you a measly \$3, and is very reasonable when you consider the quality of the game. In return you will get a code sheet. Upon loading, the program asks you for a code. If you have the sheet then you will be able to play the full game. Which is certainly fun and carry an addictive punch.

**7/10**

## Is it PD or SHAREWARE?

*All freely distributable software comes under the rather deceiving umbrella of "public domain". Quite a lot of this software is, in fact, shareware. Shareware means that if you like the software, or use it regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD. Whether or not you send a donation to the author depends totally upon your level of conscience and morals. Remember, if you send a donation to the author, you may receive an updated version of the software. Even if you don't receive an update, you will have given the author the incentive to continue contributing into the public domain.*



## Babylon 5 Slide Show



### Disk 2781 17 Bit

After the success of science fiction TV shows like Star Trek, The Next Generation and the spin off Deep Space Nine, TV companies have once again realised that science fiction shows though expensive to make are very popular. There are even plans to bring yet another Star Trek spin off to our screens called Star Trek Voyager!

There are several other Sci-Fi shows currently showing on American TV. Some of them have been successful, others not. British viewers might be aware of the program Seaquest DSV, which contains graphics created on the Amiga using the Video Toaster.

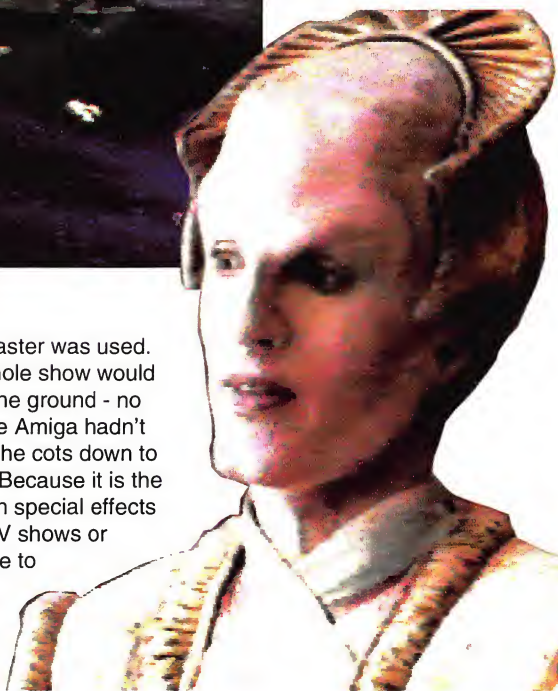
Babylon 5 is another show in

which the Video Toaster was used. It is said that the whole show would never have got off the ground - no pun intended! - if the Amiga hadn't been used to keep the costs down to a reasonable level. Because it is the huge expenditure on special effects that makes Sci-Fi TV shows or movies so expensive to create.

This disk contains 15 pictures from the Babylon 5 series.

We have printed some B5 pictures before, and these were actual rendered images which were of a very high quality. These pictures however are not. They have been

digitised directly from the TV and the quality is consequently poor. There are all in low res HAM. and though they are interesting as they were crated on the Amiga, they lack the quality



to make them really worthwhile adding to your collection.

**5/10**

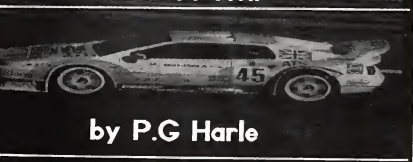


## Road 2 Hell

### Disk GA 123 Magnetic Fields

This surprisingly good AMOS game models itself on several car racing epics. It contains elements of both Nitro and SuperCars. For those of you not familiar with any of these, they are the

Road To Hell



by P.G Harle

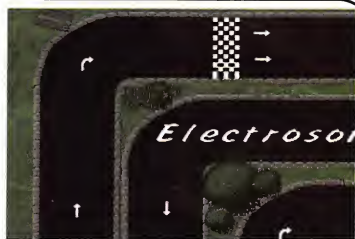
type of racing game in which you view the action from above and try to steer your car round the circuit, overtaking other cars and avoiding collision with obstacles.

Both these commercial games needed a lot of practice before you got the hang of the car. This meant much crashing and was very frustrating. As Road 2 Hell is a Shareware game, and taking into account that a lot of work has gone into it, the playability is though not up to commercial standard still very good.

As with Nitro, you can buy upgrades for your car. These range from Armour, which prolongs the life of your car, to missiles for obliterating your opponents.

You can race against the computer or even a friend. This is achieved by

Some of the most impressive pictures that I have seen have been ray traced. And by far the best have been space scenes. The pictures on



using split screen. The action is silky smooth even on a basic A500 but I still found it difficult to avoid crashing into the sides of the track (but then maybe my driving isn't that terrific after all). If you enjoy this type of racing game then Road 2 Hell is a must. It is easily the best PD version I have seen so far.

**9/10**

## Organised!

### Disk BU004 Magnetic Fields

Before the programmers at Micro-Systems software get on the phone to take Magnetic Fields to court, this is not the commercial database program of the same name, but a disk that is designed to get your life organised. It contains three programs and will be most useful to those of you who are working and are house owners.

The first program is called the Household Inventory Manager. It provides a convenient method for recording and keeping track of your valuable items such as your wonderful Amiga. It is very important that you keep accurate records of your property as this will help you get a prompt and equitable settlement from your insurance company if you have the need to make a claim.

You can enter information such as the article, description, Serial No, Location, and Insured value. Also on the disk is an accounts program called The Money Program which keeps track of your financial record.

The final program, however, is the most interesting. Organised! as it is called, is a filofax on a computer. The screen is laid out just like a filofax and includes a diary, address book, phone book, and note pad. There is even a calculator thrown in for good measure. This is an excellent disk for those of you who want get your household in order without the need for purchasing expensive software. Come, get Organised!

**8/10**

## Holodeck

### Disk 2810 A/B 17 Bit

these disk have been rendered using Imagine 2 and been touched up with Opalvision. This means they are in glorious 24 Bit. It is a shame that they have been converted into low res interlace HAM. Infinite Frontiers who created the pictures, should have released an AGA version which would have made this slide show truly breathtaking. All the slides are on the theme of Star Trek The Next Generation, and contain various Federation and Romulan Ships. As these two are enemies, most of the pictures are battle scenes. Some of the ships look hybrid; put together from several different models. But the quality of the pictures make them well worth looking at and keeping, especially for Trekkies.

**9/10**



# The P.D. STAKEOUT

## Klawz The Cat

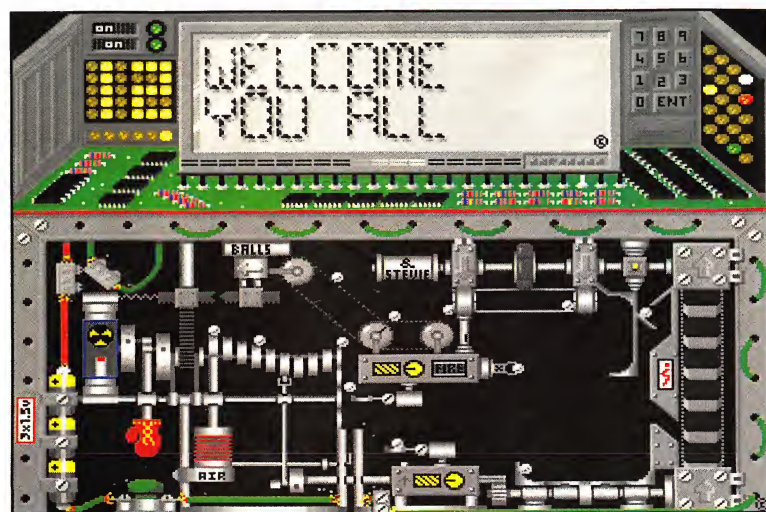


**Disk G501**  
**5 Star PD**

**6/10**

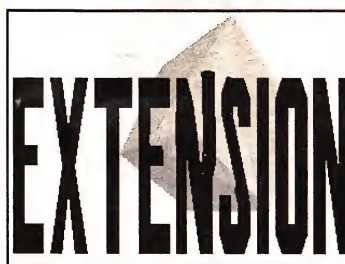
You will probably find this AMOS platform game quite frustrating to play at first, but the playability although somewhat difficult to get the hang of, is good. The aim of the game is so boring and cliched that I am not going to even talk about it. Let's just say there is someone to be rescued and you are the man, or in this case the cat for the job. All you have with you is a big wooden club with which you can momentarily stun any baddies that try to stop you.

To complete each level you have to collect all the pills that are lying on the floor and on the platforms. On the later levels some of the pills are located down the side of the ladder and have to be gathered up using the same method you would if you were playing the game BombJack. This evaluation copy only contains ten levels. If you like the game you can register and receive a staggering fifty!



## Extention

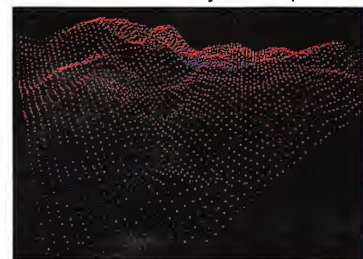
### Disk DE167 Magnetic Fields



This demo contains some nice effects, all of which are quite original and clever. On the first screen a very ordinary vector cube flies around the screen distorting the word "Extention". After this we are presented with a wonderfully

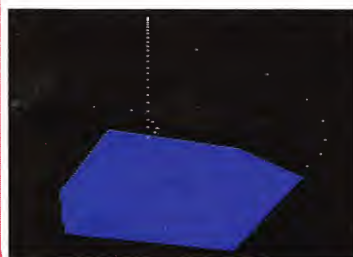
fast and colourful journey across a vector landscape.

This is followed by a very basic two colour animation of what looks like an American city. This spins



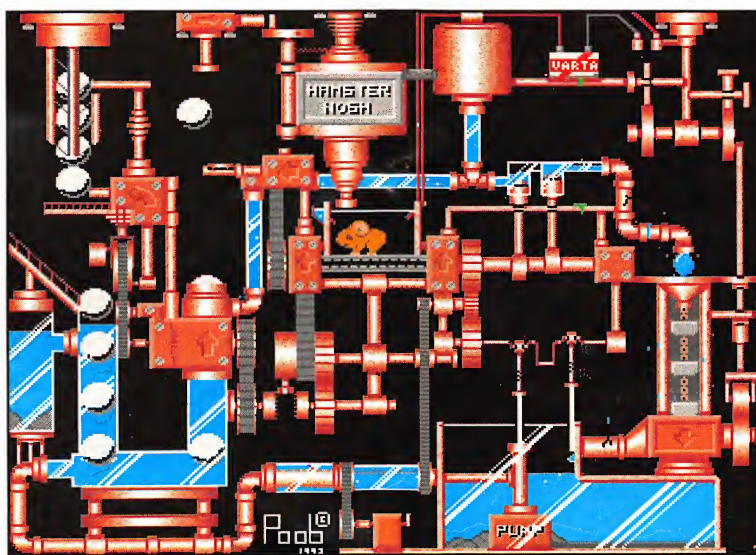
around and looks very good. The best effect is left to last. This features the return of the boring blue vector cube. However as well as just spinning monotonously around, something is added which makes it very interesting. A stream of pixels falls from the top of the screen and hits the rotating cube. They then fly off in all directions.

**7/10**



## The Machine

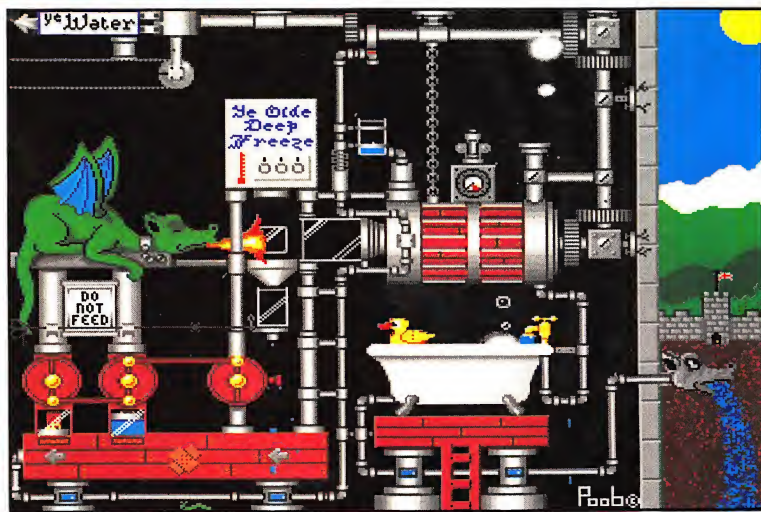
### Disk 2782 17 Bit



There is a game on the PC called The Incredible Machine. In it game you are given strange puzzles to solve. Unfortunately this disk is not that game or even a game at all but a series of three animations. Oh well, that's life..

The animations are all of complex machines in perpetual motion, and are fascinating to watch. The first is called PCB and shows balls being fed through a machine. The second is Gerb and is a complex machine just for feeding a stupid rodent. I can't work out what the third one is doing perhaps you can from the picture here. No prize if you do though.

**7/10**





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# The P.D. STAKEOUT

## Mad Fighters

Disk RGA034 Roberta Smith

It is instantly apparent where the author got the idea for this game, Street Fighter II. Even the samples appear the same, but I am afraid the graphics and game play aren't. It is so unplayable that you end up waggling the joystick randomly, desperately trying to cause some sort of injury to the other player. And unlikely to achieve much success.

Both players possess minimal graphic detail. This is probably because otherwise the Amiga would slow the action down too much. As in Street Fighter II, if you find yourself in a tight spot you can use the character's special move. This usually involves some sort of energy discharge that momentarily fries your opponent. This game could have been excellent if the programming were of higher quality

and the emphasis put more on the playability. As it is it doesn't compare to its original model.

6/10



## WB2/3 Utils 3

Disk U1080 KEW=II

This is a very useful disk which is crammed full of excellent utilities which I shall list with a brief description of the more interesting ones.

FracBlank is a commodity screen blanker which will start to draw real plane fractals, very pretty. Lazybench is similar to the excellent Tools Daemon which extends your Workbench menus and allows you to configure them to run up to 30 applications. HSV is a small palette utility which contains both HSV and RGB sliders for adjusting your screen colours.

GuiArc is a brilliant program which gives the user a friendly and easy method of dealing with archives. If you are sick of typing in the command and working out all the arguments for LHA, and don't have a copy of Directory Opus, then this program is for you.

Also on this disk is Magic Menu which you had AUI Coverdisk a couple of issues back. It is a great little program which alters the appearance of your pull down Workbench menus. You can configure it so it will act rather like the PC Windows system so you don't have to keep your finger on the right hand mouse button to keep the menu up, only a single press is required.

8/10

## Mean CD Machine

Disk CRAIG004 Roberta Smith

What can we say? Mr. Collins has done it again! What an amazing animation this is. Craig Collins decided to put his support behind Commodore's CD32 and thought that a good advertising campaign that takes people's breath away would do the trick. Let's face it, Commodore's effort doesn't exactly blow your mind!

As well as featuring the CD32, this animation contains both CD-I and Mega CD. All the machines are represented by three sports cars.

The first one over the finishing line becomes the dominating CD console on the market. Craig has introduced some new effects in this animation

including an expressive human face and animated cars. Guess which console wins the race...

This anim, like those before it, uses a 16 colour grey scale, and has no sound. This allows 1.5 minutes of high speed action. It comes on four disks and you will need a minimum of 1 meg chip and 3 meg fast ram to see it. But it is great and I'd recommend Commodore to get it into TV straight away. Great stuff!

10/10





## Disk GA095 Magnetic Fields

This vertical shoot 'em up scrolls very smoothly. That is until any enemies come onto the screen. Then it all goes horribly wrong. That is if you are using a normal A500. If



you have a A3000 it is quite playable. The graphics are very good which is strange because usually in PD shoot 'em ups the playability is good but the graphics are awful. I am not saying the playability is bad in this game, it's just very difficult.

The music and selection system are both excellent and you can see the similarity between this and the Team 17 game Project X. It is a good effort but is let down by both awkward and difficult game play.

**8/10**



## Ice Runner

### Disk GA141 Magnetic Fields

Ice Runner is a platform game based on Bload Runner which was reviewed in the October issue. This is based on the original, Lode Runner. Ice Runner however is better than Bload Runner. Still following? Good!

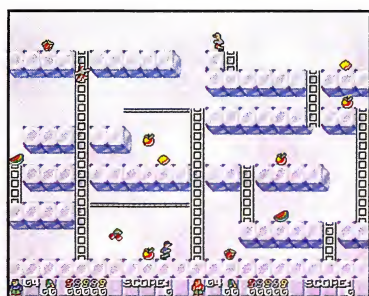
This version is better programmed and presented. You use a pick to chip through the ice. This is done if you are being chased by a baddie. He will then fall through



the hole in the ice and cling to edge for dear life. After a few seconds he'll clamber out and resume his pursuit. The ice will then freeze over a few seconds later. If you time it just right you can get the man to fall into the hole and the ice will freeze over and kill him. If you were a fan of the original Loderunner then you will love this.

Others might find it slightly too bland.

**8/10**



## Black Dawn

### Disk PG219 Pathfinder PD

Anyone who has played and enjoyed Captive will love this version of the game. It is very similar, right down to the shops from which you buy your upgrades. Both Black Dawn and Captive are modelled on the game Dungeon Master which, not surprisingly, involved you wandering through a dungeon killing baddies and casting spells as you went.

Unfortunately here there is no spell casting, but there is a lot of killing. In Captive you had to rescue a scientist who lay at the end of a very

long trail. In Black Dawn you have to complete set missions. The only aspect all the games have in common is the intelligence of the monsters. They all shuffle slowly towards you and growl from time to time causing injury. When they die, money is left on the ground which you can then use in the shop and you can buy better weapons, armour, and medical kits. Passwords are given when you complete a mission and this helps keep your interest up. There is nothing worse than a game like this that hasn't any sort of save option. Black Dawn is very playable and the only niggle is that control is via arrow icons on screen which are clicked on with the mouse. My hand was itching to use the keypad but this is not supported. But it's a really good effort.

**9/10**



## CONTACTS FOR PD REVIEWED IN THIS ISSUE

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**Q**uarterback is a reliable, easy-to-use, backup utility program from Central Coast Software which can work with disks, hard disks and other high-capacity storage units (including tape-based). The program's main window is split into two parts: the Control Panel on the left, which contains information displays and buttons for controlling Quarterback, and a Display List on the right, where Quarterback displays volume details, file catalogues, session logs, etc. A variety of pull-down menus are also available which contain commands used to control Quarterback's operation.

Many advanced features have been provided including 12-16 bit compression, direct control of tape drives, buffer and I/O characteristics, and so on. Like Ami-Back, all Quarterback program settings can be saved either as a default or user-specified file.

ARexx macros are also supported and these can be tied to the Amiga keyboard's shift-function keys and loaded on startup. Quarterback's ARexx facilities are comprehensive - there is ARexx support for the Backup and Restore operations and for path setting and all sensible Project menu, Option menu, Tag menu, Utility menu and Tape control commands. These four ARexx driven general requesters have also been provided to allow ARexx scripts to collect user-supplied OK, OK/Cancel Yes/No/Cancel and text information.

**Request1 <display info>**  
Display requester with specified text and a single OK button.

**Request2 <display info>**  
Display requester with specified text along with OK and Cancel buttons. RC set to 0 if OK is selected and 1 if Cancel is selected.

**Request3 <display info>**  
Display requester with specified text and Yes, No and Cancel buttons. RC is set to 0 if Yes is pressed, 1 if Cancel is pressed and 2 if No is pressed.

**RequestText <display info>**  
This displays a requester containing the display text along with OK and Cancel buttons and a text collection gadget. As with the other requesters RC is set to 0 if OK is selected and 1 if Cancel is selected. If OK is chosen then any text placed into the string gadget is returned in ARexx's Results variable.

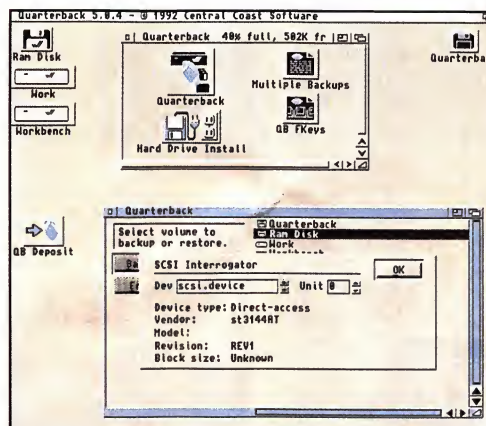
So if you want to ask a user to enter the name of a partition to be backed up you would just use this type of code:

```
options results
RequestText 'Please enter partition name'
partition_name$=results
```

The Tag commands (Tag and Untag being the Quarterback terms for selecting and

deselecting files) are a good example of the type of ARexx facilities on offer...

Tag	Tag the currently selected files and drawers
TallAll	Tag all files at the current directory level and down
Untag	Untag the currently selected files and drawers
UntagAll	Untag all files at the current directory level and down
TagFilter	Display the Tag Filter requester



With ARexx's help Quarterback operations can be completely automated.

These along with commands like SetPath <pathname> and named backup and restore instructions allow the Quarterback file selection and backup/restore process to be completely automated. Backing up all the files on a partition called Work: for example could be done using this script:

```
/* Quarterback ARexx example */
Backup 'Work:' /* partition name */
TagAll /* select all files, dirs, and sub-dirs */
Proceed /* start the backup */
```

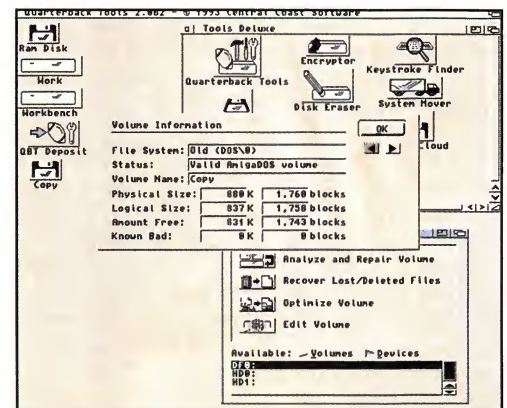
## quarterback tools

This is the accompanying set of utilities for finding and repairing problems on both hard and floppy disks. It is capable of recovering files which have been accidentally deleted, finding bad blocks and marking them as unavailable, and generally salvaging disk

information which might otherwise have been totally lost. There's a Replicator program for making multiple copies of disks, a Locator tool which can find files given only part of a name, a Brain Cloud utility that can modify a disk so that it becomes unrecognisable to AmigaDOS, and a sector editor. Other utilities include a disk eraser, file eraser, encryptor, keystroke finder and system mover tools.

You can control the main program tools via ARexx using a command set which is not unlike that of Quarterback itself. This can be done either by using the internal macro running options or via an external script. Commands are available for setting device/volume characteristics and invoking and using the various tools (Recover, Repair, Optimize, Edit and so on). In most cases you would set the appropriate general characteristics, for example, device name, select the tool, adjust the parameters to suit, and then use the Start instruction to get things moving. To use the Optimize program to rearrange a disk for faster file access for instance you could use this script:

```
/* Quarterback Tools ARexx example */
SetDevice DF0:
Optimize
OptimizeOptions FileAccess
Start
```



More ARexx goodies are on offer with Quarterback Tools.

Quarterback Tools provides similar ARexx controlled requester facilities for collecting user-supplied OK, OK/Cancel Yes/No/Cancel and text information and it is also possible to directly control the Preferences settings of the program. **a**



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# Programming TIPS

**T**his month we are going to create the final window opening program using the framework shown in listing 1. Now we have already seen how to open and close libraries and set up tag list data, and you might well have thought that, providing the Intuition library has been opened, we just need to use some Intuition library function to open a window. Unfortunately things are a little more complicated than that because in some circumstances a user (or an applications program) can close the Workbenches and a method of preventing this happening while a program is in the middle of setting up a window is needed.

## adding screen locking/unlocking code

Intuition provides a locking function which allows an application to force the Workbench to stay open. An 'unlocking' function is also available and both routines are used just like any other library functions. The required parameters are set up, the library base is placed in register a6, and the appropriate indirect subroutine call is made. On return the results (if any) are checked to see that they are valid. One way of locking the Workbench screen is to set up a static name definition using a dc.b directive along with a variable to store the returned Workbench pointer.

```
workbench_name    dc.b 'Workbench',NULL
workbench_p       ds.l 1
```

and then use this type of library call coding arrangement...

```
lock_screen    lea     workbench_name,a0    screen name pointer
                CALLSYS LockPubScreen,_IntuitionBase
                move.l  d0,workbench_p      save and check
                beq     close_int           return value?
```

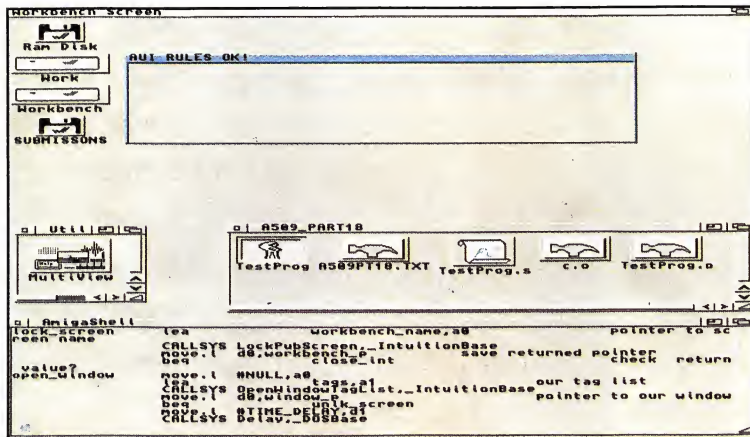
WorkBench screen unlocking is just as easy...

```
unlk_screen    move.l  #NULL,a0            screen name not needed
                move.l  workbench_p,a1      screen to unlock
                CALLSYS UnlockPubScreen,_IntuitionBase
```

You'll see from the general plan in listing 1 that a time delay is being used. This just gives you a chance to see the window appear for a few seconds without the need to use the more difficult to understand gadget or menu coupled Exec message communications. Message based coding at the assembler level is relatively complex and best avoided during early 68k coding days.

By adding the window locking/unlocking calls to the code outlined in the December issue, and setting up the OpenWindowTagList() call so that register a1 gets loaded with the start of the tag list we can pass Intuition the tag list information about the window to be opened like this:

```
open_window    move.l  #NULL,a0
                lea     tags,a1
                CALLSYS OpenWindowTagList,_IntuitionBase
```



If you are new to 68000 assembler coding then creating a window like this is an important step towards greater things!

## More assembly language help this

## month as Paul Overaa explains the

## Release 2 styled window opening

### program.

Put together these ideas allow us to produce the fragment of code shown in listing 2 which performs the Release 2+ style window opening operations. To form the final program we just place this code into the library handling skeleton code outlined in the December issue

```
OPEN DOS LIBRARY
OPEN INTUITION LIBRARY
LOCK INTUITION SCREEN
OPEN WINDOW
    USE Delay() FOR SPECIFIED TIME
CLOSE WINDOW
UNLOCK INTUITION SCREEN
CLOSE INTUITION LIBRARY
CLOSE DOS LIBRARY
```

Listing 1 The proposed framework for the example

adding the appropriate static definitions, equates and so on. You will find this finished form of source code on this month's Coverdisk along with the assembled version of the program which has been linked with some startup code to make it Workbench runnable.

Because the Tag list approach has been used this example needs a Release 2.04 based machine or later. The example code can be assembled using Devpac, A68k, or any other assembler and do remember that you will not need to use any include files because we've included all the definitions needed within the source itself. **a**

(See Superdisk 32 for more information.)

```
lock_screen    lea     workbench_name,a0    pointer to screen name
                CALLSYS LockPubScreen,_IntuitionBase
                move.l  d0,workbench_p      save returned pointer
                beq     close_int           check return value?

open_window    move.l  #NULL,a0
                lea     tags,a1             our tag list
                CALLSYS OpenWindowTagList,_IntuitionBase
                move.l  d0>window_p        pointer to our window
                beq     unlk_screen
                move.l  #TIME_DELAY,d1
                CALLSYS Delay,_DOSBase
                move.l  window_p,a0        window to close
                CALLSYS CloseWindow,_IntuitionBase

unlk_screen    move.l  #NULL,a0            screen name not needed
                move.l  workbench_p,a1      screen to unlock
                CALLSYS UnlockPubScreen,_IntuitionBase
```

Listing 2: Final window opening code

Function Name: UnlockPubScreen()  
Description: Release a public screen lock  
Call Format: UnlockPubScreen(name,[[screen])  
Registers: a0 a1  
Arguments: name - can provide pointer to name of screen.  
(normally supplied as NULL)  
screen - pointer to screen  
Return Value: None

Function Name: LockPubScreen()  
Description: Prevents a public screen from closing  
Call Format: screen = LockPubScreen(name)  
Registers: d0 a0  
Arguments: name - pointer to text string giving name of screen  
Return Value: screen - pointer to screen (or NULL if routine fails)

Function Name: Delay()  
Description: Causes program to be suspended for a specified time  
Call Format: Delay(time)  
Registers: d1  
Arguments: time - delay specified in ticks (50 ticks=1 sec)  
Return Value: None

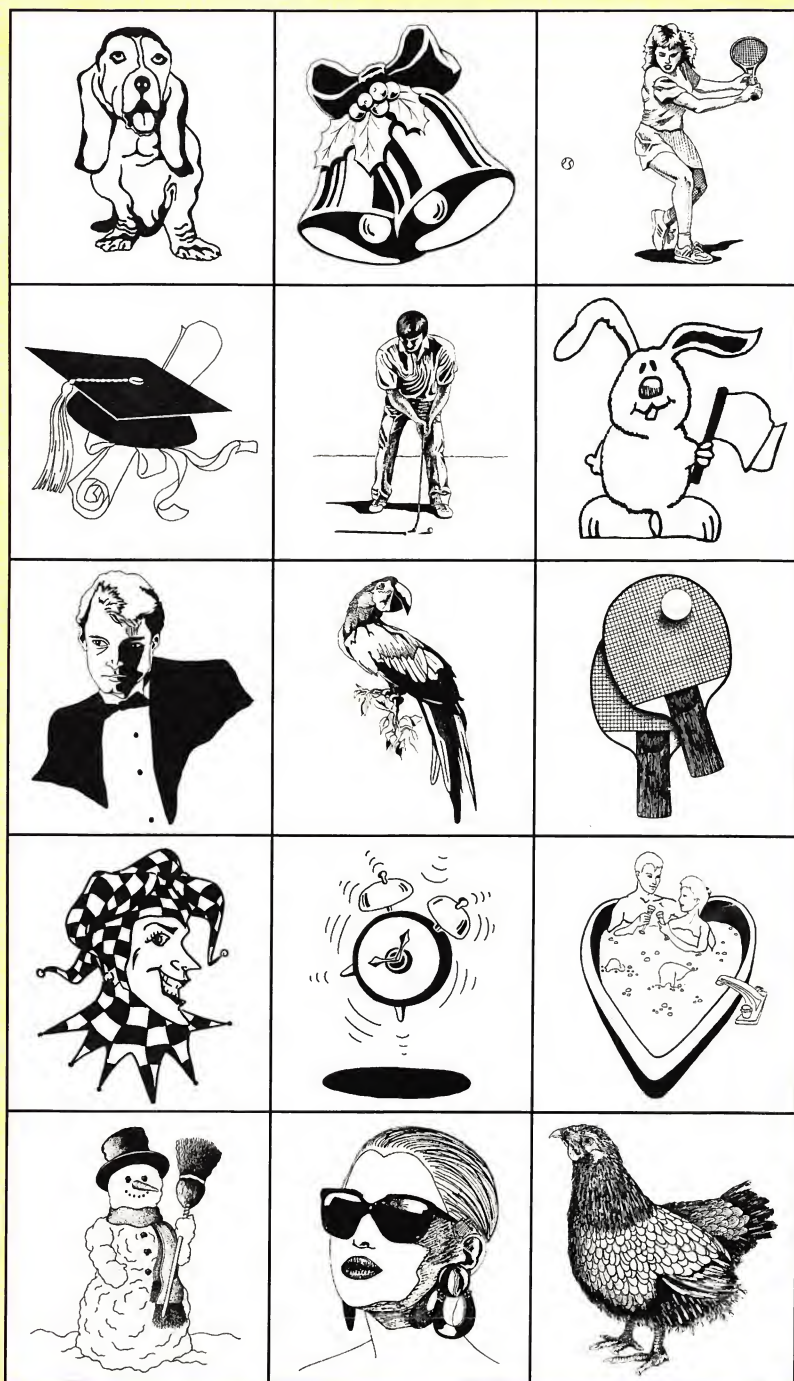


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Cartoons	Music 1	vol 440	Trees 1	vol 540
Christmas	Music 2	vol 441	Trees 2	vol 541
Festivals				



# amiga answers

## APPS

Dear **au!**,  
Re Free disk No 28 - "Stick It"  
And that's exactly what I feel like  
telling you to do with it!

Firstly congratulations on finally getting a decrunching procedure which is uncomplicated, easy to use and effective. I don't often find much on these disks which I find useful, although there have been the occasional proggies and this month there were two which I though I could use. The first was DosTrace which did sound like an improvement on old Snoopdos. I decrunched it, loaded it and it ran beautifully. No problems. Now if only I could understand everything it was telling me!

Next I thought a kind of notepad on the screen at any time and any place would be handy, so I went through the same procedure with Stickit. It decrunched OK, put its stickit.notes file where I wanted it and then nothing would induce it to run! Ami keeps giving me an error #80000003 I can't find any reference to that in that gynomous Workbench 2 manual. Since I read somewhere in the notes for this program that it does not run on WB1.3 I had better tell you what my set up here is.

I have an old A500 which has been updated to (I hope!) 2.04 status. Anyway here is what Amiga herself says about her status.

Release 2  
Kickstart 37.175  
Workbench 37.71  
Chip Mem 332536  
Fastmem 3707808  
Tot.Mem 4040344  
CPU 68000  
ECS Pal Agnus  
ECS Denise  
(with a GVP A500 HD8+ 120meg hard drive)

So why won't this Stickit program run, please?

John McKillop  
Glasgow

## Answer Types

<b>APPS</b>	Programs etc]
<b>VIDEO</b>	Video related problems
<b>COMMS</b>	Communications
<b>PROG</b>	Programming
<b>OS</b>	Operating System
<b>PRINT</b>	Printer Problems
<b>OTHER</b>	For anything else

Dear John,  
I agree about DosTrace, it is a useful program and like SnoopDos (which I will always say is probably the most useful utility I have ever used) it does take a lot of getting used to. Only time and study will solve that problem! I am happy that you like the decrunching system, thanks must go the Commodore for producing the installer utility and allowing it to be used so freely.

I must admit that I am rather baffled as to why Stickit gurus with an 80000003 error, which is an addressing error. I am running a very similar system to yourself, with three exceptions. You have a slightly higher revision of Workbench, (I have 37.67), I have an upgraded A2000 and I have 1 Meg of chip RAM. There have been occasions where a program will fail if it gets confused with the amount of chip RAM in the system. It is possible that this is the cause of the problem, but unfortunately I have no means of finding out exactly. I will forward your problem on to the author of Stickit and see what he has to say on the matter.

## APPS

Dear **au!**,  
If it had worked I would have liked it. After much pontification, the final result was that I was not impressed. Each program never worked. The Mod Player required Kickstart 2.0V. This was after trying to load the programs to ram, HD and FD in all the told ways but to no avail.

You said it was tested on 1.3 which is what I was using on my A500, so we tried it on the A500+ using WB2.04 and again no joy.

I wonder if any other users have had the same problem or maybe I should learn to read again?

Sappers Dave Gaskell  
& Viv Richards.

Dear Dave and Viv,  
I've given some of the programs on the Coverdisk a try, and I've not had any problems at all, except for RDS which runs fine from the CLI but not the Workbench (there was a note about this in the following **au!**) I had never tried the modplayer before today. Well I decrunched it, clicked on the icon and up popped a CD system. Is that as far as you got on the 500+ and WB2.04?

If it was I suggest that you open the CD drawer and pop a disk in! This threw me for a few seconds and I did my normal thing of NOT reading the instructions! However, it is a rather natty player system and most of the controls on the analyser and player work. If you have any specific problem please remember to tell me what the problem is. I can't read minds, and I don't like not being able to help.

## OS

Dear **au!**,  
I am a new boy to the world of Amiga and am trying very hard to find out how the damn thing works. I have had the pleasure of owning a Dragon 32 which still works. I have kids and I played a very simple games on it, but, of course, there is no comparison between the two. I worked for 35 years for a large British Telecommunications company (no names) and used keyboards regularly for CADs workloads and records etc, but what goes on inside is a complete mystery.

Can you please help with a major, to me anyway, problem? How the hell do I install the UK keyboard and the printer Samsung SP0912 which, of



course, is Epson emulation? I have followed the instructions to the letter and get unable to copy IFF files in both cases. At the moment this is not causing me too much grief as I am not clever enough to use graphics, can always write pounds and the default printer setting in the multiview package works.

By the way I have a A1200 working on WB 3.0. I have studied the Commodore manual and Bruce Smith's excellent Insider Guide till I am going loopy, but to no avail. Please please can you point me in the right direction?

I found your magazine very good and it answered one of my queries in one of the articles, but may I make one tiny comment and that is please say if a joystick is needed or which keys can be used in lieu to use the Superdisk. There may be other thickies out here who are new to the game like me and find it difficult enough without struggling to load Megaworm and then can't use it. Perhaps you would consider mentioning what extras are needed in all reviews.

Denis Townson  
Cornwall

Dear Denis,  
I can understand your frustration with the keyboard, but I must admit that I have learned to know which key to press on a UK keyboard with the US keymap loaded, because I come across it so many times.

You will find that there are lots of keymaps available and as you have WB 3 it is a fairly easy job to sort out. On one of your disks you will find a whole list of keyboard drivers, what you have to do is copy the UK keyboard into the devs/keyboard directory of your boot disk if it is not already there. Once you have done this you can use the SetMap program to set the system to use the UK keyboard.



Click once on the SetMap icon and select information from the Workbench/Icons menu. Enter the Tooltype KEYMAP=gb and save.

Double click on the SetMap and all will work as a UK keyboard.

To make the UK keyboard come up on boot up you need to set an environment variable. Open up the preferences drawer and make sure you have got on the show all files option (Workbench menu).

You will see a hidden drawer called env-archive. Open this up and you will see some more drawers. Open the sys drawer.

You should find a file called keyboard. If not create one! (Use ed) If there is one use ed to edit it. All it has to say is gb (or whichever keymap you fancy).

Remember to save the file (the WB2 ed has a pull down menu option for this) and then reboot. You will then always use the gb keyboard.

## PRINT

Dear *au*i

I have just recently bought a Citizen Swift 240 for my Amiga 1200 and I would like to know if it is possible to print different fonts than just those stored in the printer's memory.

I have customised my Workbench fonts and now would like to print with them.

I have Protext 4.3 and have looked through the menus but could not find anything to help me. Will I need some software to help me? If so, can I pick it up cheaply or on PD?

Also, I have been experiencing a few problems with some of the software on your Coverdisks, like Speechtoy 2. When I decrunched the program, I double clicked on the icon then some disk activity happened as if it were loading but nothing loaded. I have tried putting it in Workbench but the same thing happens. I have read the doc and it just says to double click on the Speechtoy icon.

And finally I have a Philips 8833 II monitor which does not support the AA chipset. Does this mean that UChess in the PD section would look like it was being played through the older A500?

Dominic  
Dorchester

Dear Dominic,  
Protext is a Word Processor and a very good one too. (I used it for Amiga Answers). However, it is merely a word processor and as such it only supports whatever your

printer provides. The Workbench fonts will look second rate compared to the printer's own fonts.

If you want to print in high quality with a variety of fonts, then the way to do this is via a Desk Top Publishing package such as Pagesetter. This uses Compugraphic Fonts which are mathematically calculated and as such look good at all sorts of different sizes.

The problem with this, is that it takes quite a bit of processing power to calculate each character. The CGcache helps by storing the outline of the font for a particular size as it calculates it but the more complex the document the longer it takes to print.

The other method is to use a PostScript type of output. PostScript is a method of telling the printer exactly how to lay out the page and it is normally found on the higher range laser printers, not much use to you I'm afraid.

The 8833 II monitor will quite happily work with the AA chipset, it just will not display all of the advanced screen modes, but as far as the number of colours go, the 8833 will display all two hundred and fifty odd thousand of them. Just don't try for the 'super' or 'productivity' modes.

If you only include the standard monitor icon in your monitors drawer you should only get the modes that particular monitor can use. Note that the monitor drivers are very general and there may be the odd mode with which one type of monitor or another won't work very well.

Coverdisk Speechtoy, please remember to let me know which Coverdisk you are referring to; that helps quite a bit!

The A1200 needs the narrator.device, check your libs/devs directory. Due to some copyright problems the narrator system was not included with the A1200 computers. The docs of Speechtoy clearly state that it needs narrator.

## VIDEO

Dear *au*i,

First of all congratulations for being the best AMIGA mag in the world.

I have a little problem with the VIEWTEK program on Superdisk 27, I use an A3000 with 10Mb RAM, Caligari 24 and DCTV.

When I make a DCTV animation using the ANIM5 format, (736 x 283 x 4 bitplanes) and I viewed the animation using VIEWTEK, the anim wasn't encoded by DCTV as a DCTV animation, so only the HIRES

anim was shown (NOT the connected DCTV anim).

I even brought out the top left of the overscan anims, (using control + arrows), just to make sure that DCTV's specific image code was seen by the AMIGA, but it didn't help. When I viewed the same animation using Animation Stations View program, the anim was correctly encoded by DCTV so that wasn't a problem. The strange thing about it was when I got to view one DCTV image (not Anim) using Viewtek, one image was correctly encoded by DCTV.

I also tried to play the anim7 format of that anim, but again no DCTV anim.

Could you please help me solve this problem, because I definitely want to play my DCTV animations using the superior anim7 format?

Peter Schooes  
Belgium

Dear Peter,  
Viewtek was rather weak in the Animation Display area. All I can say is that the latest version. 1.05 that I have seems to do a better job than 1.04. Remember that Viewtek is a PD program and as such it does evolve.

Also, the Viewtek docs do say that MOST Anim5 formats are supported, perhaps yours is one that it does not support. I'm fairly sure that you just have a slight file format problem and I'm afraid that it will only get sorted out by a software upgrade to one of your packages. Have you tried using the make anim 7 program supplied in the Viewtek distribution?

## OTHER

Dear *au*i,

Having bought an Amiga 1200 in January 93 and after a few months usage had a hard drive fitted and then I found I was short of documentation.

The original 1200 came with the "Amiga 1200 and Workbench Users Guide," but suggested documentation in the hand book included the AmigaDOS ARexx and Amiga hard drive users guide.

I have tried through the local shop and have written the Commodore Business Machines at Milton Keynes, who directed me to CPC in Preston, but I am still without the documentation which I feel is required if one is to use the machine to its so-called full potential.

Having read the blurb about how good the machine is, I find it very disappointing that Commodore have passed the

responsibility of manuals and spares to CPC who when queried say "We only do what Commodore tells us".

I would be interested to hear your comments as *au*i does cover a lot of questions which seemingly are not covered in the Amiga manuals if you can get them.

Captain R.F.Weller  
Aberdeen

Dear Captain Weller,  
The full set of CBM handbooks do contain a book on AmigaDos (more specifically using a hard drive) and also one on ARexx.

The standard A1200 does not come with the Hard Drive manual nor ARexx manual, for a couple of reasons. There is no hard drive fitted to the A1200 as standard and it helps to keep the cost down.

You don't say exactly what happened with CPC. They do handle most of CBM's spares distribution and they do normally sort things out. The comment about only doing what Commodore tells them is fair enough - there will be a precise contract between the two companies.

Have you just said that you want to buy a new set of manuals? The other point to note is that whoever fitted the hard drive should be able to supply the documentation that you require.

There are several other sources of documentation about AmigaDos. The developers will go for the AmigaDOS manual (it also has a full list of the commands, and gives information on ed and edit) There is also the Abacus book AmigaDos Inside and Out, as is Mastering AmigaDos.

There are also similar books on ARexx.

## OTHER

Dear *au*i

I have added a 4 megabyte RAM board with a 33 Mhz 68882 FPU to my A1200

Everything seems to work fine but both the RAM chips and the FPU seem to get extremely hot after a few hours use. The trapdoor area under the A1200 gets hot too.

It worries me that such complex equipment generates such heat, yet I know that electronics do generate heat. Should I worry?

Paul Davis  
Somerset

Dear Paul,  
Chips do generate a LOT of heat, that's why many computers have fans in them. In fact, the junction temperature of some devices can



# ← amiga answers ?

reach 150 plus degrees! Fortunately it is such a small area that gets hot that by the time the heat reaches the outside of the chip the temperature has dropped.

Many modern processors (the 68040 as used in the A4000) have a heat sink attached directly to the top of the chip to keep the temperature stable.

The general rule is that if you can keep your finger on the chip for 10 seconds without saying Ow! then you are OK. If the chips are too hot to touch then you need to think about giving them some extra cooling. (If you have some means of measuring the temperature, then you should be aiming for a temperature in the region of 50 degrees or less.)

## OTHER

Dear *aii*,  
I would be extremely grateful if you could answer me some simple questions concerning your coverdisks.

1. When I decrunch a programme to the RAM Disk (which is simple) all too often my RAM disk quickly fills up so can you tell me what do I type at the shell prompt to clear the RAM disk? For example, if I decrunch "speed" from *aii* 29 in the RAM disk, once I select CD RAM is there anything that will delete the program in one go?

I've bought your magazine now for a few months and honestly think it's the best. I used to read Amiga Format but felt I was getting ripped off as the so called Special Issues were just rehacks of what was in the monthly issue, so keep the good work going - one gripe, Amiga Answers could be larger.

2. Who do I have to write to order back issues those with the Coverdisks anyway - by the way the simplified decrunching is excellent - also, I realise that the cost of this might be prohibitive to me, so I was wondering if it is possible to buy a bundle of Coverdisks say Nov 92 to Nov 93 etc for a reduced price?

3. The Transplant game that came a month or so back doesn't seem to run on my A500+ (unexpanded). I get the intro music and Transplant logo, but if I try to play the game it crashes and I end up with a white line

down a black screen (no Guru!) all the other programs on the disk work fine - any idea what's going wrong?

4. Your feature "Storage" a month or so ago was excellent. I've been toying with the idea of buying a GVP HD8+ hard drive for my Amiga as the price for a 42Mb Set up is only £199. That is until I read about the Western Digital 170Mb drive you installed into an A1200. Can you tell me if this would fit inside my 500+ and if it does, do I have to buy any other hardware such as a controller etc? Is any delicate soldering involved? If not, what internal drive would you go for?

5. What is Hyper Helpers? I've got the disk off my brother, but no instructions as he ruined the mag by spilling coffee over it and threw it away before allowing me to prize the instructions out of it. Any chance I can get a reprint?

Mr S.Calnan  
Norfolk

Dear Mr S.Calnan,

1. My little tutorial on Lha will have answered this question for you, but just in case you did not read it the process is:

For WB2 and above (you really should have told me what version of Workbench you are using!) Open the RAM disk, select show all files from the window/show Workbench menu. This will bring up all the files including the hidden ones. Select a file, use extended select (shift and click) or draw a box around the icons that you want to delete, then select Icons/delete from the Workbench menu and that will do the job.

For WB1.3 open up a shell and type `cd RAM:`

`type dir <ret>`

`type delete file.name <ret>`

where file.name is the name of the file that you want to delete and any dotted extensions to the name. That will delete any single file.

If the files have similar names then you can use the Amiga shell wildcards? and # the general use is:

`delete nnn#?.#? <ret>` where

nnn are the first few characters of the common file names. For example, if you had files called:

Amiga-test.one

Amiga-test.two

Amiga-test.three

Andys.file.test

Pats.file.test

Pauls.file.test

the command `delete a#?.#?`  
<ret> will delete all the files starting with an 'a'.

The command `delete am#?.#?` will delete all the files called Amiga... but leave Andys.file.test alone.

`delete pa#?.#? <ret>` will delete both pats, and Pauls files because the few characters you entered are not unique.

`delete Pau#?.#? <ret>` will only delete Pauls.file.test.

2. Yes, you can back order CoverDisks separately. They cost £2 each including postage and packing.

3. Transplant, yes, there seems to be something very odd about this game. Try booting from the Coverdisk (a copy of please). If it works from there then that is the way to use it. I have been unable to get this game working any other way. If it does not work then you will have to put it down as one of those things that sometimes happen due to a variation in the specifications of your own hardware that the programmers - or us - have no way of knowing about..

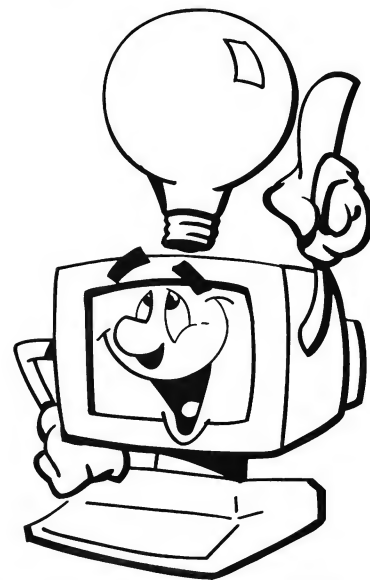
4. The A1200 has the disk drive controller circuit already built in, so fitting a hard drive is simply a matter of getting the correct drive and fitting it.

The A500 has no disk controller circuit fitted as standard, and the normal method to attach a hard drive is via the side port expansion. The CBM drive for the A500 is the A590. There are lots of third party versions of this from which to choose. As for the type, well, the only real answer is 'as big a capacity as possible'. You will soon fill it.

Please consider the backup problems associated with owning a hard drive.

5. Hyper Helpers is a form of on line help come programs launcher come lots of things. You need *aii* Feb 1993 for the instructions. (You also need to have a few words with your brother as well!)

As for Amiga Answers being larger, well, the size of Amiga Answers does vary, for one very good reason, I sort out the problems as they arrive. If I get a small postbag, then Amiga Answers is smaller, a larger postbag then Amiga Answers gets larger. So to a reasonable extent, it is *aii* readers who determine how big Amiga Answers is. There are, of course, some limits, due to publication deadlines and typesetting and some letters have to be held over until to other issues.



**When writing to Amiga Answers include as much information as possible about your system and about which software/hardware you are running. This will help to determine what your problem might be and its solution!**

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# write to reply

**This is where you get your chance to speak – or write – your mind about what’s bugging you. Bud Vennos fields the bouquets and the brickbats.**

Dear *AUI*,  
Since I bought *AUI*, in about January 93, I've been hooked. The most interesting part of the magazine has to be the Field Reports and the interviews with people like Lew Eggebrecht. However, I think you should give the gaming section of the magazine a rethink. The reviews are short, don't mention hardly anything about the game and usually overrate games, and if you haven't overrated them, you underrate them! An example of this was the review of *Indy Jones 4*. A good game, sure, but 98%? I don't mean expand your games coverage, just improve the reviews and marks.

Oh, and can people stop complaining about Commodore and the news of new chipsets. Enjoy your Amiga. I paid £1500 for my A4000/030 with a 240MB HD and 6 MB of RAM. Only to find that the same machine, after a few months would of only cost me £1230. Do I feel

ripped off by Commodore and feel the urge to buy a PC? No way. My A4000 is still a great machine and I enjoy using it. It's very obvious that the A1200 and CD32 are going to remain the same, the A4000/030 is going to be replaced with the AA+ chipset and A4000/040 is going to be replaced with the AAA chipset, but I don't care, I am looking forward to that day actually.

Being ripped off by Commodore have made people buy PCs, mainly because they, and PC owners alike, claim they are future proof. But they're not. PC owners claim these machines are expandable, that you could add loads of stuff to them and that they're future proof. I don't think. The 286 is dead, the 386 is going, you need 4MB to even get a PC running and a 240MB HD to make anything useful, PCs still can't scroll, still don't know what multimedia is and are still the useless machines

they have always been, don't be fooled by a cheap price tag. Loads of PC manufacturers are going bust (over 340 in the last year) because there are so many PC clones. The Amiga has a future, no matter what model you own.

Yours Sincerely,  
Steven Browne  
Camberley, Surrey.

Dear Steven,  
First about our games coverage. I think you are right. We do overrate or underrate games. That's my opinion. Ah but that's because I don't agree - or only rarely - with those joystick addicts who review them - for this or any other magazine. What I like - as it seems for you too - is very infrequently what the experts who have played everything that has been playable since blobs on the first Sinclairs made their appearance. So overrate? Underrate? It's all a matter of taste - I think fashion too. A game appears on the scene and it has

something new that appeals to that particular reviewer and Shazam! We have a super game on our hands - or, of course, just the opposite. If it doesn't have a fashionable gimmick - load of crap!

I remember being in the office when the first demo disk of *Lemmings* arrived. The reviewer sat down and in five minutes was absolutely hooked and raving about it. It seems that thousands of others felt the same way.

I've recently seen some kids - kids I might say who have not previously shown any enormous fondness for computer games - with ages ranging from 9 to 17, completely addicted to *Zool 2*. I don't know what *AUI*'s reviewers will make of it but I can tell you those young punters convinced me that *THEY* think it deserves 100%! But will you - or me think the same?

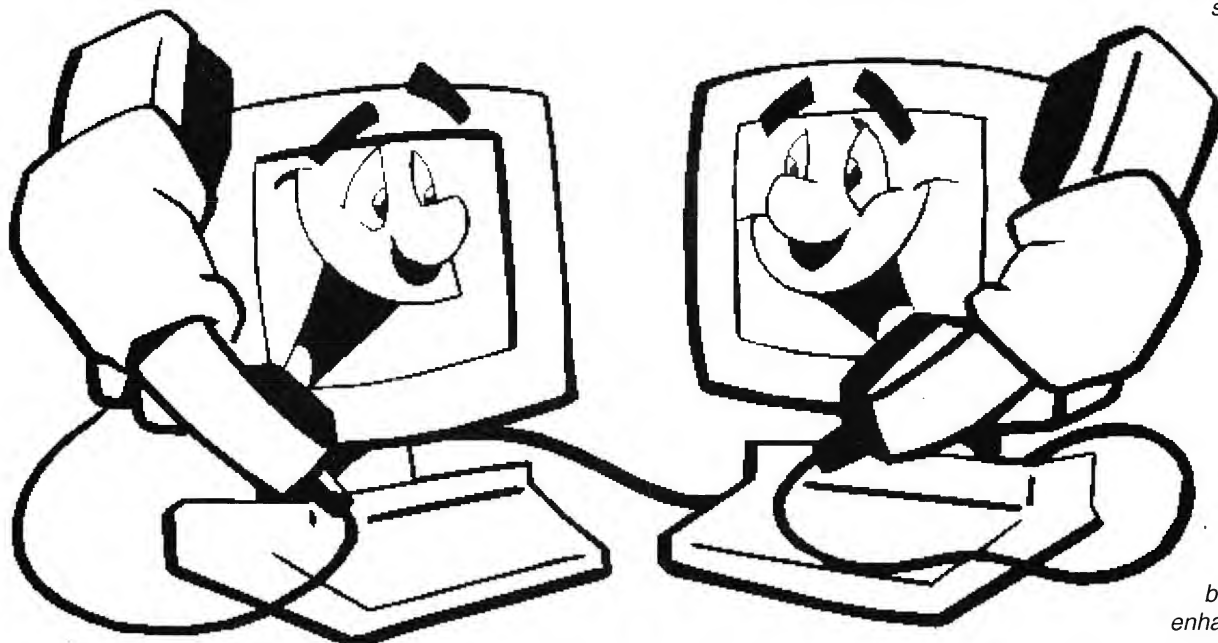
It's all a matter of taste - as Socrates said as he swallowed the hemlock. And that's not an entirely inappropriate allusion if you remember that he was sentenced to death for the alleged crime of corrupting young people!

As for the matter of people being ripped off by Commodore. You are clearly right about this. No-one forces anyone to buy any computer or computer equipment. and Neither CBM nor any other single company with possible exceptions of MicroSoft or Intel is responsible for the fall in prices in this ever-changing computer world.

Commodore could come out with a product one day and find the next that they *MUST* bring down the price to match a competitor's product. What should they do, keep the price up and lose business because someone has just bought

what they were selling the day before at the old price? Quite rightly you say that what counts is the machine and the capabilities you have bought not actually any new price.

The value of something rests in what you want to do with it not the price you pay for it. You are obviously a person with common sense for your Amiga hasn't changed from when you bought it and if it's doing what you want then that's what counts. and if CBM, as you say, brings in the new enhancements to the Amiga





# write to reply

## CONTINUED

sooner or later they too fall in price and become available to everyone. I've just read in a catalogue someone selling a 2000 - or rather a 1500 as they call it - with a free PC bridgeboard. It just shows what happens when prices fall. (I think that CBM made their big mistake when they didn't include a MSDOS bridgeboard as standard in the first place.

As you point out MSDOS isn't so terrific but if that's what the easily impressed business user wanted why didn't CBM give it to them? And from what we hear that's just what may happen in the not too distant future with the coming Amigas.

And as for anything to do with changing prices or even specifications, if I may jump from the Greek Socrates to the Romans - it's always a case of caveat emptor - buyer beware!

Dear AUI

Many of us are waiting with baited breath for news of Commodore's future. But there sure is a whole lot of hot air being passed around in the Amiga Magazines about how the AmigaCD32 is going to pull Commodore's bottom line up out of the red and into the black. And if you believe that, I would suggest that you are a prime candidate for a SCI-FI RPG-induced psychosis. Because that's what those deus-ex-machina stories are: science fiction. Remember CDTV? 'Nuff said. It really galls me to see you reporters trying to convince us that Commodore is "restructuring" and "streamlining" and in an excellent position to take on the competition. That's like saying that the Titanic was restructuring its flotation potential to challenge the competition for seafaring space.

I hate it when you say that Commodore suffered losses due to the fluctuation of the international dollar value and the belt-tightening state of the

worldwide economy. That's the same kind of hype we accuse Mac and PC Magazines of when they fail to report on Amiga's prowess.

Why can't you admit that Commodore suffered losses because Commodore's comatose leadership makes Moe, Larry, and Curley look like Mensa Members? Why can't you just come out and say that Commodore's in deep trouble because the company's strategic planning is as intelligent and foresighted as Laurel and Hardy's attempt to move a piano... And why can't you tell us the truth about why Commodore's upper Management (Jim Dionne, Kelly Sumner, et al) are behaving like popping corn with no lid.

Is it fear? You know, for the last several years, you have been urging us to hype the Amiga to our friends; to show its power to potential new users; in short, to do Commodore's marketing for them. All in the name of loyalty to our favourite computer - Amiga. And we did.

Our user groups got involved in mall shows, multimedia expos, cable TV infomercials, and a variety of other activities designed to promote the Amiga. As individuals, we become Amiga evangelists, singing the praises of the miraculous machine to anyone who would listen (and quite a few who wouldn't).

Now, we would like to challenge you. It's time for you to do your part to help the Amiga survive. We're asking you to start reporting the Truth, The Whole Truth and Nothing but the Truth. Maintain your integrity as journalists and expose Commodore to some light. Use your journalistic talents to ferret out some real news, instead of the press release and hyper-hype we've been getting lately. And when the truth comes to light,

use your power of the press and call for the resignation of the current short-sighted, greed addicted, self-destructive leaders of the company. Use your media influence to demand an end to this reign of stupidity at Commodore.

We've done our part. We bought stock. We voted. We marketed. Now how about doing your part? You've got the power. Ciao for now...

Frank G. Salvatini  
President: Metropolitan  
Amiga Computer Enthusiasts  
Roselle, Illinois, USA

Dear Frank.

Wow! You really lay it on the line! And there's a great deal of truth in what you say. Any company in deep trouble is largely responsible for its own fate. It's not an Act of God like a storm hole in the roof, it's not Force Majeure or any of those cop out expressions that insurance companies use to get out of paying for whatever has gone wrong - it's the management who are responsible for what goes wrong and also what goes right.

Business management is more an art than a science whatever the business schools may tell you. I know of one business school in the UK who recently sent out a project requirement to its students and when they sent it back, gave them all low marks commenting the students hadn't done what was required. When the students protested they had, it turned out that the school hadn't sent out the right questions! If that can happen with those who instruct our potential business leaders, is it surprising that present - supposed - business leaders get it wrong? (Or is that just a comment on just British management?)

And there is no question that you are right when you complain that CBM got it wrong. But how did they get wrong? Was it, as it seems you feel, the marketing? That's even more of an art than management. How many really huge companies have made mistakes there? Everyone of them, I'd say. Even Ford with the (in)famous Edsel - a car named after his son that no-one wanted to buy. And look at IBM today.

Was it technology? Well, WE all love the Amiga but did it advance quickly enough? Did the CBM management live on the fat of the 500 too long?

Some years ago, in this magazine, there appeared an interview with a man called Tom

Rattigan. He and a John Sculley had both been Vice Presidents of Pepsi Cola. Rattigan came to Commodore and Sculley went to Apple. Both attempted to lay the foundation for the recovery of their new companies (Apple had been hit by THEIR marketing disaster - the Lisa.).

Sculley found that he couldn't do what he wanted with the founder Steve Jobs in the company and engineered a boardroom coup and pushed Jobs out. Rattigan tried the same at Commodore and attempted to get rid of Irving Gould, the Chairman. He didn't succeed and got escorted off the premises and later made an apparently successful claim for some \$9 million in compensation. Which may have begun CBM's problems.

However, ironically, John Sculley has recently departed Apple after they entered a period of big losses. And Steve Jobs tried to start a new computer company NeXT which also seems to have gone down the tubes. It's not an easy world, this computer business..

Though while you are right in saying that so many Amiga users have been terrifically loyal and they have been the most successful publicists and promoters for the Amiga and you imply - what many people have often said - that the Amiga has succeeded in spite rather than because of Commodore, you have also to realise that Commodore does not live in a world of its own. It suffers all the pressures and unpredictabilities that happen in this extraordinary computing world. For example, even now it may have to lower its horizon for the pricing for the Amigas that haven't even come out yet. Because the computers using Intel's new Pentium chip, which have only just come onto the market, have already fallen in price from about £5000 for a standard machine to £2500. And that's in about 6 months since the machines came on sale. And if the Amiga is to compete for the power users, the Pentium is one they'll have to take on.

I would add one more thing. Any company needs to change and grow and that's very difficult for anyone who stays in the same job for very long. Commodore have had many senior managers come and depart but the Boss, Irving Gould, has not changed. It's very hard for someone who has built a company to relinquish control - particularly if it's his own money that's at stake. But the



time always comes for a change.  
So don't give up hope. The Amiga, if it has succeeded in spite of Commodore in the past, may do so still. And you and I and the other loyal Amiga users may yet see it come through on top. As they used say in your country where the Amiga was created, hang in there and stay loose.

**Dear AUI**

Readers may be glad to know that the CDTV is very compatible with the Amiga 512 software & extended 1 meg software. Also you can use 2 or 3 disk drives when in the Amiga mode, and it is also capable of a Modem interface. So in a sense you've got two for the price of one. When in CDTV mode it will only recognise 1 disk drive i.e. the black one, until you turn the key at the back of the CDTV player. Make sure when you turn the key that the cd player is switched off.

I myself am satisfied with the quality CDs which you can just get for it and that I hope more people will learn of the CDTV in the future.

Yours Faithfully  
Tim D. Bartrop

*Dear Tim,  
You are right. More people should take notice of the CDTV which can now be bought at a ridiculously low price. Yes, CBM didn't succeed in breaking into the world's sitting rooms with a new technology but that doesn't mean that CDTV doesn't have a pretty good bit of ability behind it.*

*A cheap CD machine, sir?  
Why not try one that will run Amiga stuff and play your CDs?  
Right on, Tim!*

**Dear AUI,**

I like AUI and I always have. But I have to tell you that I don't think recently you've been competing for your readership. The other magazines have been offering full programs and though I frankly don't think much of the mags themselves, it's a great temptation to buy them just for the programs. Even if you don't use a program all the time it's nice to see it in the disk box!

I think your articles treat the Amiga in a sensible way and though I'm no expert I can usually understand them. And even if I don't ever get to use some of the super hardware and software you review it's great to know it exists. It's obvious that some of the other

mags don't know what they are talking about and only give a superficial look at things. But they still give us all those juicy full programs, so what can an Amiga user do?

Keep up the good work. I like your present coverdisks but let us have some full programs to go with them.

All the best,  
Michael Sawyer  
Salisbury,  
Wilts

*Dear Michael,  
Great minds think alike... We get enough feedback to show us that Amiga users do like the stuff we print but they also, like you, want to fill their disk boxes. So this month and we hope to go on in the coming issues, there is a full program - Personal Paint - and very good it is too! Have fun with this one and don't just leave it in your disk box. And thanks for the compliments - they are always encouraging.*

**Dear AUI,**

Why is it that everyone goes mad at Christmas time and the TV and the papers are full of ads for hardware? Why do computers have to be reduced to the level of toys because I suppose that is what is what they are at this time. Is it true that parents do really rush out and buy their kids even PCs for Christmas pressies? Or is it just in this country?

I spent some time in the States and the Amiga isn't seen on TV there treated as an alternative to a Nintendo. In fact, most Amiga users there now seem to have 4000s! They don't only want the computer to play games on.

What is it about this country that we have reduced the whole Amiga scene to a scramble to sell or buy £25 games? I hate to sound like Disgusted of Tunbridge Wells - though I do often go there but isn't there something wrong with a country that needs to ruin the Amiga like this?

Sandra Mitchell  
Kent

*Dear Sandra,  
You may have put your finger on it...there could be something wrong with a country that seems to think that the Amiga is only for games. It's an advanced piece of technology but it seems that the British software industry has been, in general, unable to come to terms with the machine as a serious computer. Virtually all the*

*the productivity or business software and hardware add-ons have come out of the USA or Germany. Occasionally, you'll get a Digita or a Rombo who do come up with something worthwhile but usually it's the games side that rules. Why? Could it be that over recent years what has happened to this country is the quick buck - or rather pound - has come to be the important thing. Grab what you can and forget tomorrow. Serious computer products need planning and investment, two things that most British companies hardly do anymore. They've been given the example, no doubt, by a Government who have, to quote a past Conservative prime minister, "Sold the family silver." If you do that, in other words if you*

*take the easy way out, sooner or later it finds you out.*

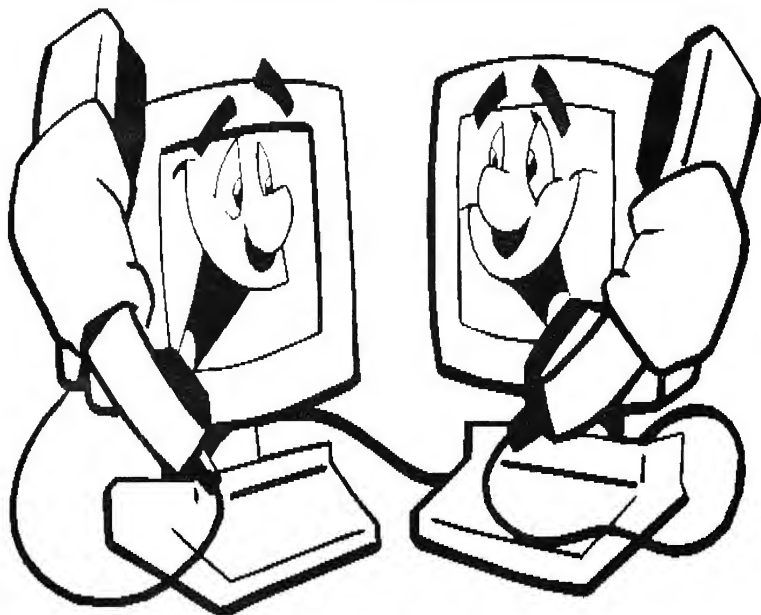
*Technically we're great. But our technology goes abroad to countries where they don't believe in trying to cheat their way to success or if not cheat at least get it on the cheap. They know that value for money doesn't always come at the lowest price.*

*And WE end up with Commodore having to try to sell a high tech machine as a toy for Christmas not for its best use but for its lowest price. Oh dear, it is a bit depressing, isn't it? But even bad times don't last for ever. We've got to believe that the goodies will win in the end. So a Happier New Year to you - and all Amiga users!, especially those reading AUI!*

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***au***

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competition

# Win a Vidi-24 RT!

Ok, Wiseguys, let's see your photos! Maybe even you can win a Vidi-24 RT!



**T**he Vidi-Amiga is one of the greatest graphics products to appear on your favourite computer. In our review this month we have given it a superb 98%. The new add-on is one that everybody would love to have and there is a colossal demand building up so that it's obviously going to be one of the really top Amiga products of 1994. And unlike some graphics add-ons it will go with any Amiga so anyone can enter for this competition and have a terrific time with this really easy-to-use digitiser.

It grabs as the RT suggests in real time so there is no boring hanging about!

The same applies to the competition!

All you have to do is send us a photograph of your own. The photograph must either be on a Scottish theme - that doesn't mean of Scotland necessarily, it could even be of a bottle of scotch or anything in any way that could be associated with something Scottish - or a photograph that somewhere contains within it something connected with (not to!) an Amiga. It can be anything even an Amiga

User International magazine. The Amiga - or **AUI** or anything relevant to an Amiga - doesn't have to star it can be tiny but it has to be there.

What we want is some imaginative treatment of the subject - show us how David Baileyish you are. And we - or rather Rombo who are kindly giving us the prizes - will offer you fame too, because they have told us that the winning photo will appear in a forthcoming advertisement. This could mean worldwide exposure for you - your chance at the bigtime!

The winning entry will get one of the brand new Rombo 24 bit real time digitisers - the Vidi 2, worth £299.

Two runners up will receive the excellent Vidi 12 each worth £199.

Entries must be colour prints not larger than 10" x 8" and must be your own property and not taken from some magazine - even **AUI!** - or a postcard you've bought!

We're sorry but no photos can be returned, so don't send us that irreplaceable daguerrotype of your great-grandmother sitting on the Loch Ness monster.

Entries must reach us by March 31st 1994 and the decision of the Editor - who reckons himself something of an art critic - is final.



Send your entries to:  
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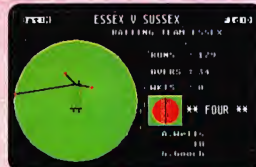
## CRICKET MASTERS

This is a purely managerial cricket manager game that concentrates on strategy and includes plenty of relevant statistics. The game has been designed and developed by a true fan of the sport. It replicates everything that a real manager has to contend with and it's a totally unique production that anyone with an interest in Cricket should experience. A summary of the main features is shown below:-

- AXA EQUITY & LAW 18 league county teams, 50 overs per game.
- 4 Cup competitions including Benson & Hedges, Nat West.
- 20 different match umpires with accurate names and strictness.
- Accurate player details Surname, height and age.
- 27 different player attributes. Most skills have a direct impact on the effectiveness of each individuals actions during a simulated match.
- Easy player selection. All game text is clearly presented.
- Batting and bowling averages. Top batting and bowling tables.
- 3 Different training intensities to boost batting, bowling or fielding.
- Weather, pitch and light often make an impact on ground condition.

• Full match highlights let you watch the action ball by ball with full graphics and/or realistic sampled sound effects for significant events (Fours, Umpire decisions, etc.). Interventions are permitted at any time to change batting tactics or fielding placings.

- 3 Batting/Bowling classifications (Normal, Attack and Defend).
- Choice of 15 different field placings.
- Full scorecard results with best batting and bowling figures.
- Other staff (Physio, Groundkeeper, Scout) can be hired and fired.
- Annual league fixtures listing. Current week and last league results.
- View current cup competition draws and historic records.
- Real time transfer market. Player contract and wage negotiations.
- Sponsors, Printer access, Finances, Poor ground fines, Manager rating.
- 15 Options to alter game preferences, Load/Save game.
- Instruction book with plenty of examples.
- Plus many more fine details that we are unable to list here.



## STABLE MASTERS V2

This game has been designed to be as close to real racing as possible. Five years of development by a clever racing expert has led to the second revision of this Flat Horse Racing Simulation. Up to 4 players can participate as Owner Trainers with the primary objective of becoming the top rated trainer, in respect of prize money won, at the end of each racing season (March to November). There are up to 35 other intelligently controlled computer trainers to compete against and compare your personal performance. To achieve this aim you must discover a potential champion and train them so that they become capable of competing well and winning any of the 47 big prize money races (Handicap and Group). eg. The Derby To give you an idea of the tools provided in this game to assist you reaching your objective we have listed the main features below:-

- 250 horses each with over 60 independent variables.
- 26 different race courses (2 all weather), real life characteristics mirroring the diversity of racecourses in the UK (descriptions provided).



- 20 Jockeys who vary in ability and booking fees, Orders & Feedback.
- Formbook and Win Summary Cards cover the previous 200 races.
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Version 1 is available upon request (Simple training & betting) @ £15.

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## World Cup Cricket Masters

A fantastic graphical and/or tactical representation of Cricket that has been completely written by a traditional fan. You can physically participate with batting and/or bowling or leave it to the computer to automatically handle. See full feature list below :-

### GAME OPTIONS

- 1 Day limited overs or test.
- White or coloured clothing.
- Three Cricket grounds.
- Load/Save game. Skill levels.
- Computer/Human players.

### ANIMATED ACTION

- Sound Commentary.
- Umpire signals.
- All the strokes cut, pull, drive, etc.
- Appeals, dropped catches, run outs.
- Bouncers, wides and no balls.

### STATISTICS

- Scorecard & bowling analysis.
- Weather and ground reports
- Wagon Wheel
- Manhattan Chart.

### PLAYER VARIETY

- Rated on 8 adjustable factors.
- Left and right handed players.
- Range of batting types.
- Editor to amend game stats.
- Bowler types include seam, swing, change and both types of spin with 8 speed levels.



### FRIENDLY CONTROLS

- Icon driven with point & click.
- Large 3D scrolling screen covering the entire playing area.
- Mouse controls bowler's line, length, direction field settings.
- Joystick control of batsman's attack level, strokes and running between wickets.

### VARIABLE CONDITIONS

- Surface and pace of pitch
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This package contains detailed installation instructions and everything you need to increase your computers speed from 7MHz to 28MHz in record time.

- Enables the use of high speed modems while multi-tasking.
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